The ACCOUNTING REVIEW

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ECONOMIC CONSIDERATIONS OF OBSOLESCENCE

EDMUND WHITTAKER

ONE OFTEN hears it said that obsolescence is essentially a modern problem, the result of increased rapidity of economic and social change. It is implied that events moved more slowly in the past so that articles remained in use until they were worn out. Brief reflection, however, is enough to show that this view is incorrect. Perhaps there is more obsolence than formerly but undoubtedly there was a good deal in the past.

Our knowledge of prehistoric times is largely based on the study of tools, utensils and weapons which have come down to us because they have outlived by centuries their uses and users, although, for the purpose originally in view, many of them are just as serviceable as when first they were constructed.

The major changes of history have been accompanied by large-scale obsolescence of fixed capital. Take the case of the fall of the Roman Empire; the barbarians whose power succeeded that of Rome over large parts of the Empire had no use for many of the items of capital equipment which fell into their hands. Villas innumerable passed into decay. Perfectly good stretches of road were allowed to remain unused and have come down even to modern times in a reasonable state of preservation. Defence walls performed no further service when the same people lived on each side while baths were useless to tribesmen who did not bathe. Much of our knowledge of Roman civilization is derived from relics whose survival in their present state is explained in this way. When feudalism gave place to more centralized government and internal warfare became uncommon, considerable defensive equipment owned by medieval barons and city authorities—walls, moats, drawbridges, fortified gates and so forth—became obsolete except when situated so near to national frontiers that it possessed utility for external defence. The Reformation led to the abandonment of monasteries and churches in many instances, or their utilization for purposes other than those for which they were originally intended, both courses certainly being accompanied by loss. Reformers of austere spirit had little use for many of the costly features of pre-Reformation churches and shrines, and even where the buildings themselves continued to be employed for religious purposes these portions were often removed or ignored. The Moslem conquest of Constantinople closed an important trade route between the Eastern and Western worlds and, coupled with other changes, led to a considerable decline in the importance of Mediterrannean ports and, in particular, of Venice. The Atlantic seaboard, by the same causes, was brought to the front of the picture and no small portion of the subsequent histories of such countries as Britain and Holland is thus explained. Without question, capital values were affected in both areas as the Southern European seaports lost trade to their Northern rivals, what we now call obsolescence emerging in the former.

Natural phenomena—such as the silting up of river mouths, changes in tastes and in social customs, big shifts in production due to the discovery of new resources or the exhaustion of those formerly worked, and even inventions, have not been confined to modern times. Writers on English economic conditions during the sixteenth century refer to the unemployment and distress among

rural workers which resulted from the enclosure of arable land for sheep farming. The sufferings of the hand-loom weavers in the North of England, when power looms came into use over a hundred years ago provide an example of more recent date. The Pennine Hills of Lancashire and Yorkshire still contain numerous buildings in various stages of decay, in which cloth was woven by water power prior to the introduction of steam power. Wind mills are still standing, whose machinery has not operated within the memory of living men. The growth in size and change in type of the ocean-going ship has been reflected in various ways. Great harbors of former times have been abandoned or have lost the bulk of their seagoing traffic. Biddeford harbor, for instance, the home port of many sailors famous in British history, is now a quiet backwater incapable of giving room to modern shipping and used principally as a holiday resort. The introduction of iron and later steel vessels dealt a severe blow to some of the old shipbuilding centers on the Atlantic coast of this country. Methods of warfare have changed continually, rendering armour and other kinds of long-lasting equipment obsolete. Until quite recently, many of the harbors of England could show at least one example of the old "wooden walls," used as training ships or lying as hulks. Fortifications, considered impregnable when they were constructed, proved vulnerable at a later date or were abandoned because their obsolescence was recognized. The fate of the Liége forts in the face of German gunfire in 1914 will be remembered and many of the other battles of history have been decided by the circumstance that one of the contestants possessed equipment which turned out to be obsolete.

Human beings, in former times, changed and died exactly as they do today. Almost every important museum in Europe and many private mansions have in their possession perfectly good specimens of suits of armour over a wide range of types and historic periods and, when one remembers how small were the numbers of persons so equipped, it is easy to see that we have obsolescence largely to thank for the existence of so many exhibits. As King Henry became too corpulent for a suit of armour made to meassure in his youthful days, or Fitzherbert passed on to the next world, their armour was apt to become obsolete. Perhaps there was no one to whom it might rightfully pass or the problems of adjusting the cut and fit may have been insuperable.

Were these changes not comparable with what has been occurring in recent years? We see lately, for instance, a decline in church-going which is presenting religious bodies with a large-scale problem of unused capacity and bringing financial difficulties in its train, as the diminished congregations experience trouble in maintaining their church fabrics. We have watched a fall in the birth rate which has left every city in the United States cumbered with dwellings which were erected to house the bigger families which were usual years ago. Minneapolis has been to some extent superseded as a flour-milling center, with the result that the Minneapolis milling companies, notwithstanding their ownership of ample facilities at that point, have constructed new plants at Buffalo and in the Kansas-Oklahoma region.[1] The growth in the popularity of the automobile has been attended by such diverse results as the obsolescence of plant and skill in wagon building, the decline in popularity of certain holiday resorts which were conveniently reached by railroad in favor of others farther afield, and the fall in value of city real estate which is not provided with garage facilities.[2]

[1] The Pillsbury Flour Mills Company recently transferred some of its Minneapolis equipment to a new mill at Springfield, Illinois. (See the 1936–37 Report of this Company.) Evidently, it was not the equipment, but Minneapolis, which was considered to be obsolete.

[2] At times, the history of change seems to repeat itself with remarkable results. A certain village, whose name and location are here immaterial, has had two hotel sites in the past hundred years. The village street runs for half a mile at right angles to a road joining two large centers of population. In the days before the coming of the railroad, a hostelry was built at a corner of the village street which entered this road. It flourished greatly, if old tales are to be accepted. By and by however a railroad track was laid, paralleling the road but passing by the other end of the village street. Here a new hotel was constructed, which took away much of the business of its older competitor. Finally, the hotel was closed and converted into dwellings. The wheels of time, however, moved again and automobile traffic be-

What significant feature is common to these various happenings? Are we to say merely that the things concerned have continued in existence after their usefulness has disappeared? If so, it may the be case that this was expected and provided for. An arrow-head, for example, to be serviceable had to possess qualities of hardness and sharpness which ensured that it would last long after the purpose of its construction had been served. A hunter or military commander may have been well aware that there was small chance that the arrow, once shot from its bow, would be recovered, yet, having regard to the alternative means open to him of bringing down the game or defeating the enemy, may have considered the construction of the arrow-head worth while notwithstanding this circumstance. A wedding frock may be bought, with reasonable certainty that it will be used only once, but its purchaser may have no doubt whatever that its price has been well spent. A new automobile may be acquired by someone who plans to dispose of it at the end of a season or two for a fraction of its cost. A patent medicine company may pack its product in glass bottles which—barring breakages—will remain intact in its customers' hands when the medicine is consumed. With respect to such articles, there may arise a physical problem regarding the disposal of the scrap and inspection of the junk heaps of modern America will reveal how serious this can be.[3] From the economic point of view, however, there is no problem. Costs and returns can be estimated and a decision reached as to whether or not production shall go forward under the conditions concerned.

The unexpected is more serious. Production may be decided upon in the light of given expectations and events so move afterwards that these are disappointed. This possibility is always present when something is produced or acquired with a view to the enjoyment of benefits accruing therefrom in a subsequent period, because circumstances may alter between the time when the costs of production or acquisition are incurred and that in which the return is received. A savage spends considerable time in arranging a cave to his liking, to be driven out of it by a neighboring tribesman before he can get any benefit from his labor. The citizens of Chester build quays, only to find that the River Dee sands up, rendering their investment valueless. A boy trains as a glass blower, but before he has worked in this occupation for more than a few years the invention of a bottle-making machine causes his skill to become obsolete. A farmer buys a new tractor and trades it in at a heavy loss for a superior model two years afterwards. In each of these cases there are two processes of interest to us, the preliminary calculation upon which the action taken is based and that made afterwards for the purpose of examining its results. The savage may not proceed very far, or very scientifically, with either, whereas the farmer may figure it all carefully in dollars and cents, but, in principle at all events, there is no difference between their procedures.[4] Costs—all estimated—are balanced against expected returns and the enterprise is only gone forward with if the latter appear to be in excess. Afterwards, the costs and returns which were actually experienced are balanced with the intention of discovering the extent of the gain or loss.

came important. The old road was improved and became an important artery of traffic. The turn of the old hotel site came again and upon it was built a new structure, complete with garage, filling station, tea garden, and other modern conveniences, and the victor of yesterday suffers decline in its turn. This modest example characterizes something which is widespread in our civilization, as shifts in population and industry are everywhere reflected in changing sites values. In some places, these rise and we speak of 'unearned increment.' Elsewhere, there emerges form of obsolescence which we may call 'unearned decrement.' Owing to the growth of population in the past, the former has usually exceeded the latter, but if, with the passage of time, population declines, probably the decrement will be in excess.

[3] It must be borne in mind that articles of this class are by no means always small and easy to dispose of. Concrete structures erected to house an important exhibition, for example, at Wembley Park near London, may present a major problem after the gates are closed. The Crystal Palace, also of London, was built for such a purpose and came to be regarded as a 'white elephant' before its destruction by fire recently.

[4] This is not imply that all actions are rational, still less that only economic motives are important. The economic basis of the decisions, however, is as given.

The former is a matter of estimation, while the latter is, as far as possible, one of fact. Certain kinds of businesses habitually make both calculations in great detail, such as building contractors or engineering firms whose orders are received after quotations have been submitted in advance. Comparisons between the data which formed the basis of the quotations and the costs actually experienced is often exceedingly enlightening. All the items of cost may in fact differ from those utilized in preparing the quotations. Labor may be dearer or cheaper and more or less of it may have been required. Raw materials may have altered in price or unexpected difficulties, such as trouble in respect of the foundations of a new building, may have been experienced. In production for a competitive market of more ordinary kind, similar estimates are often made, though usually with less attention to detail, and again a comparison of estimate with experience is apt to show wide divergencies. Market conditions may have changed substantially during the time occupied by the productive process, or a newly-invented machine appeared which the manufacturer—faced with the certainty that his competitors will instal it even if he does not—has thought it desirable to introduce.

It must be remembered that these happenings may be productive of benefit as well as of loss to the enterprise. Raw material prices may move in its favor or public taste show a greater preference for its product, so that unexpected profits result. With this aspect however, we are not here concerned. Our problem is with the losses which arise. Not, indeed, with all of these but only with those which are consequent on unexpected diminution in the usefulness of something which has been produced or acquired. Even with this limitation, our field is by no means clearly defined. A plant for the production of electricity, erected because in 1913 its construction appeared to be an economic proposition, may have failed to pay in the 1918–20 period, when its variable costs were high and the authority responsible for its regulation refused to sanction any increase in electricity rates. Is the resulting condition to be termed obsolescence? If not, why not? No doubt the accountants or public utility consultants of 1918 would advise its owners to defer taking any action in the matter until economic conditions became more stable but this is an answer which may be difficult to apply to other cases. For example, may it not happen that if the population of the United States continues to increase for the next thirty years—as is commonly forecasted—the full capacity of the Minneapolis flour mills, mentioned elsewhere, passes into use again? Evidently, all that can be done is to come to some decision in the light of circumstances which have the appearance of stability and be willing to retrace or extend the steps taken later, if need be.

This brings us to the problem of recognizing obsolescence when it exists. The skilled technician, whose employment disappears with the introduction of a new process and who is compelled to accept lower wages elsewhere, has no difficulty on this point. The same applies to the owner of the machine with which he formerly worked and which now finds its way into the scrap pile. If a manufacturer, possessing a machine which was bought in the expectation that it would last ten years and was depreciated in his accounts on this basis, discards it at the end of half this interval because something better has been put on the market, the obsolescence is clear enough to him, though—having regard to what we shall say later on the subject of incidence—the question of who bears the loss may not be as simple as appears at first sight. On the other hand, it may happen that plant obsolescence is merely suspected to be the cause of diminished profits. All that is known with any certainty by those who run the business is the fact of the decline. The explanation may lie in equipment which is getting out of date or in a location which is no longer that best suited to the conditions of the trade. On the other hand, excess capacity may be emerging in the industry because public taste is shifting in other directions. The management may be at fault. Examination of national statistics of consumption and similar data may rule out the possibility that the whole industry is declining.

Possibly comparison of results with those shown by competing firms may be very helpful but, in the last resort, it may be impossible to determine whether managerial failings or some form of site or plant obsolescence are to blame. To revise the plant valuation to bring it into keeping with the diminished profits assumes what requires first to be proved, namely that obsolescence of plant is responsible for the falling off in profits. One might suggest experimentation with management—altering personnel or policies with a view to discovering whether improvement results—before deciding that obsolescence is the culprit. Managements, however, though often willing to alter their policies, do not ordinarily favor managerial suicide as a way out of business difficulties. What may be called partial obsolescence is a frequent source of difficulty. Machines or buildings may be somewhat out of date yet not so far gone as to merit discard. Should this be recognized by writing them down to a level commensurate with the results of operating them? As one of the principal reasons for making accounting records is to analyse profits or losses as fully as possible, the answer appears to be in the positive. Yet, if such a course is decided upon, the difficulty of diagnosing the case should be borne in mind and supporting evidence—for instance, to the effect that a more successful competitor operates machines of a superior type—obtained.[5]

Next to identification, comes the problem of incidence. Admitting that obsolescence exists, upon whom does it fall? Certainly, not only on the owner of equipment in the usual case. The introduction of a bottle-making machine, or a change in the most favorable location for a flour-milling plant, affects two classes of people; those directly interested in the site, equipment, or labor, and those indirectly concerned. The interest of the former group is obvious enough, but it must be remembered that the local community has a concern in the fortunes of the undertakings which operate in its midst. Fixed capital has been constructed for their use—houses, roads, schools and the rest—and this may be rendered wholly or partly obsolete if the plant closes. House-owners, storekeepers, and others may be willing to bear some of the loss, indeed they may have no choice in the matter. They receive lower rents and profits. The public purse is affected. In some instances very serious burdens have been laid on particular localities in this way. In the New England and Atlantic States and again in the Great Lakes area many farms, showing themselves unprofitable, have been abandoned. The process of abandonment has concentrated tax burdens on the farms remaining in operation and thus hastened the general movement away from the area. Recently, in England, there has been a pronounced shifting of industry from the northern to the southern counties, leaving in its wake a serious problem of poor relief which has pressed heavily upon the industries which remained. Is it to be recommended that the public authorities of such declining areas recognize the partial obsolescence of their roads, schools, and so forth, and write down these assets at the expense of their bondholders, or should action be taken whose effect is to spread the burden over a wider area? These are fiscal questions, however, into which we need not enter.

Skilled laborers evidently bear a great deal of the cost of plant obsolescence. how much depending largely on the ease with which they can effect an entry into some other occupation or move into a different area. Partial obsolescence, also, may be to some extent absorbed by the workers, who accept lower wages in order to preserve a market for their labor.[6] From the economic angle, it is both interesting and disturbing

[5] Much of the so-called 'excess capacity' of modern industry takes the form of semi-obsolete establishments, maintained in a usable condition for the purpose of meeting seasonal or cyclical peaks in demand, because its owners desire to have reserve capacity available against emergencies, or because they have not lost hope that a change in demand will warrant the reopening of these properties.

[6] Cases are not unknown in which employers have voluntarily assumed some or indeed all of the burden of labor obsolescence, by giving the workers whose skill has become redundant equally well-paid positions in other portions of their business. Such actions may not be entirely altruistic, of course, as their advertising value may be exploited.

to reflect that there must be many cases where innovations are introduced which are economically unprofitable to society. A firm may decide to introduce a new machine or process because, allowing for plant obsolescence on the one hand and the benefits likely to accrue from reduction in labor costs or from increased output on the other, the change seems likely to pay. The loss which may be suffered by skilled laborers who are thrown out of employment does not enter into the calculation, although, from the social standpoint, it is just as important as plant obsolescence.

The business man's position in the matter, however, is clear. If obsolescence looms up, it is in his interest to throw as much as possible of its cost on to the shoulders of others, by bargaining with workers and others with whom he deals, including—of course—the local taxation authorities. If his workers expect to have no difficulty in securing other employment at wages which are not greatly diminished and his local government is not much concerned about his contributions to its revenue, the opportunities for escaping much of the loss will be slight, If, on the other hand, both workers and taxing authorities are likely to suffer severely from a closing down of the plant, the owner may have considerable success in shifting the burden on to them.

Again, in connection with the introduction of a completely new machine, considerable obsolescence is often experienced in the early stages, as one small improvement after another leads to the discard of successive models of the machine. Much of this, of course, is done at the expense of the producer of the machine but the process may continue after it has been placed upon the commercial market. Fearing that prospective buyers will hold off making their purchases until some finality in construction is reached, the manufacturers of the machine may be willing to assume some of the risk of obsolescence by, for example, granting liberal trade-in allowances for early models against the purchase of subsequent ones. Here again, incidence may be to some extent a matter of bargaining between the parties concerned. Some important manufacturers of machines rent out their products and themselves assume the risks of obsolescence. In some other cases, the incidence of cost may be determined by contractual rights. The obsolescence of the talent of a theater or movie star who has lost his public appeal because of a change in taste or a private failing on his part may fall on the production company with whom he has a long-term contract. Similarly, the owners of a short line of railroad may have leased their property for a lengthy period to a more important road, when any obsolescence accruing in respect of the former track will fall upon its lessees during the currency of the lease.

The question of the incidence of obsolescence was of great influence in determining the nature of the organization set up in England for the manufacture of munitions during the war of 1914–18. It was evident to prospective manufacturers that the length of the war was very problematical, which raised the question as to what should be the period over which the fixed costs of munition plant were to be absorbed. A contractor may be aware that the weakest serviceable model of a certain item of equipment was likely to last for ten years with reasonable care in usage. Elsewhere, he may have more than one possibility—say a wooden building which would last for five years or a brick erection good for twenty. But what guarantee had he that the war would not end in twelve months? Two possibilities lay open. He may take the risk by guessing the length of the war, calculating his costs on the basis that the expected plant obsolescence should be absorbed over the estimated period. One can imagine, however, the complaints which would arise from the general public, unused to thinking in terms of obsolescence, respecting the price of munitions in this event. On the other hand, he might insist that in some way the government itself assume the risk. Undoubtedly, the existence of this difficulty was to some extent responsible for government intervention in munition manufacture during the war.

In whatever manner the incidence of obsolescence cost is determined, it is the ac-

countant's task to measure that part which falls upon the owners of the undertaking whose accounts are in his charge. Unless its cost is determined and reflected in the accounts, any figure shown there in respect of profit is misleading. Let us take the case of a mine or other business, such as a chemical company, which exploits a wasting asset. A considerable amount of what broadly may be called obsolescence is certain, because the capital invested in the plant will lose most of its value when the deposit is worked out. It may, however, be quite impossible to give anything beyond a rough estimate as to the life of the enterprise. There are two possibilities. First, that no account is taken of depletion, in which case it would be enlightening to the stockholders if their so-called dividend checks were accompanied by some such statement as the following:

> Your quarterly check is enclosed. We are unable to give any indication as to how much of the amount, if any, represents interest on your investment and how much represents return of your capital.

On the contrary, some estimation might be made of depletion and charges levied against the annual revenue of the enterprise for the purpose of maintaining its capital intact. Presumably the company would then have cash on hand or investments made in other quarters when the time came that its mining property was exhausted.

Obsolescence of the type emphasized in the present article, however, namely that which is unexpected, is—because of this unexpectedness—not easy to provide for beforehand. That is, it is difficult to charge its cost against the products *in respect of which it is incurred.* The fact that accounts are prepared periodically, before the whole enterprise is wound up, is responsible for this position. Costs cannot be charged with any accuracy, when it is entirely debatable how heavy they will be. With small obsolescence losses, this may appear immaterial. For instance, ordinary farmers experience from year to year occasional losses by reason of the obsolescence of agricultural machines and it does not seem very important whether they try to make allowance beforehand for these, by levying sufficiently high depreciation charges or otherwise, or are content to leave them to be dealt with after they emerge. The difference becomes much more important with major obsolescence. Economic principles require that as far as possible *all* costs should be charged against the revenue from the production of the commodity in respect of which they are incurred. Applying this principle to obsolescence, we may say that the risks which are run on account of obsolescence should be made evident to the consumers of the commodity concerned, in such a manner as will restrict their demand in keeping with these risks, that is, by raising its price proportionately. If these risks are realized by investors, this end is reached through the higher rate of return they require as an inducement to enter the business but in the interests of clarity there is much in favor of an attempt being made by the managers of the enterprise to separate the allowance made for risk and the return on capital as such, in other words for making an obsolescence charge *at the time the risk is being run* as distinct from dealing with the situation as well as they are able afterwards.

Let us examine, for the moment, the history of municipal transport in England. Because of unduly optimistic estimates of the useful life of horse tramways, some local governments found themselves faced with loss on account of obsolescence when this form of transport gave place to electricity and then sought salvation by charging the loss against the new electric tramway undertakings, which also were owned by them. More recently, a similar state of affairs has arisen in that the electric tramways themselves have been superseded by bus services and private automobiles before their capital was fully amortized. A variety of devices has been developed to take care of the resulting obsolescence, ranging from attempts to charge it against the automobile transportation services, against the consumers of electric power, and against the local taxpayers. The problem has been simplified to some extent, in that the same local government has provided the several forms of pub-

lic utility services. The users of the electric tramways were burdened with the obsolescence cost of the horse trams but escaped that of the electric tramways themselves. Now, however, the position seems to have arisen that the motor bus services are meeting too much competition from private automobiles to be able to support the accrued obsolescence on the electric tramways while the automobile owners in many cases have gone to live outside the limits of the local taxing body. In the light of such circumstances, it is difficult to resist advocating that obsolescence reserves should be set up in keeping with what are considered to be the risks involved, by annual charges made during the currency of the undertaking which is thought to have the obsolescence risk. Obviously the extent of the risk can only be conjectured but the economic considerations which have been outlined, as well as those of financial stability, support making an attempt to allow for it. Experience elsewhere would have to be our guide and it might be hazarded that the annual charges may not need to be very high, because, although some of the obsolescence losses to which reference has been made have been severe, the industries concerned have for the most part had a long time in which to make preparations to meet them. Men, however, appear to be inherently optimistic. They write off losses but continue on the basis that their future experience will be more fortunate. Having taken obsolescence losses on road coaches and river packets, they establish rail rates and keep railroad accounts on the assumption that the railroads will never become obsolete. They change over from horse-drawn street cars to electric tramways with the same unreal assumption. Notwithstanding what has happened in other public utility fields, they now appear to expect that the manufacture and distribution of electricity will continue permanently without alterations of such a nature as will cause serious obsolescence of the plant.

It must be realized, however, that a practical difficulty stands in the way of making obsolescence charges during the lifetime of an undertaking whose rates are subject to public control. The development of railroads in new countries brought out this point. Private enterprise has never been backwards in assuming risks, providing only that the opportunity for gain was commensurate with the risk involved. In entering the railroad field in an undeveloped country, this was not always the case, because the risk of capital loss may be heavy while high profits were ruled out by the certainty of rate regulation if the undertaking proved successful. Railroad promoters and local legislators, therefore, looked to non-railroad sources—such as land grants—for inducements to railroad construction, or sought a way out of the difficulty by government guarantee of interest on railroad capital. In some instances, the government itself constructed the railroads. The case of the war munitions industry, mentioned above, was very similar. Obviously, though, from our viewpoint, the effect of government construction or guarantee is that the government assumes the risk. Not the only effect, be it noted, because instances are not wanting in which government authorities which owned utility undertakings have used their regulatory powers to restrict the growth of competing enterprises, with the object of avoiding obsolescence in their own undertakings.[7]

These facts have obvious implications in the public utility field in America at the present time. To some extent, private capitalists have been frightened from the industry, not because they fear that its plant will be superseded by new inventions but because of possible losses which may result from government regulation. On the other hand, the Federal Government and numerous municipalities have entered the industry on their own account. Let us hope that if the time comes when, say, some physicist manages to split up the atom in such a way as to give us electricity without much of the present equipment, obsolescence reserves will have been accumulated in sufficient amount to preserve the solvency of these government units.

[7] Thus, certain British municipalities which owned electric tramway systems, when licensing bus companies, inserted clauses whose intention was to limit the competition of the latter with the tramways.

INVENTORY RESERVES AS AN ELEMENT OF INVENTORY POLICY

CLARENCE B. NICKERSON

Within the last two years a marked revival of interest in the base-stock method[1] of inventory valuation has developed. Recent literature on the subject has stressed its long-run benefits and its significance under present and prospective conditions of rising prices. These aspects are of major importance, though doubtless the interest of many advocates has been quickened by the possibilities of the method in the computation of profit subject to the undistributed profits tax, should the government allow it for this purpose in the near future.

The method also has an appeal at this time, because business men are in a mood to grasp at aids in the development of stability and conservative management. The mood is vastly more important than the method. It has been suggested that we would not have reached the false heights preceding the crash in 1929, nor would we have felt so severely "the years of the locust," had the method been widely adopted in 1921. This we shall never know, but it does seem reasonable to suppose that much might have been accomplished in this direction had business men at large tempered their actions during the upswing by maintaining as a cardinal feature of management the development and maintenance of conservative policies, of which the base-stock method is a reflection rather than the thing itself. Any such benefits that might come from wide adoption of the method in the future will come only through the adoption or development of the spirit as well as the form. This involves much more than a mere change in bookkeeping technique inspired by tax considerations.

It is acknowledged by all writers on the subject that the base-stock method is by no means new, having been used, for example, in principle at least by both the American Smelting and Refining Company and the National Lead Company for over 30 years. Nevertheless, it has received but slow acceptance in actual practice and there is still much confusion and difference of opinion as to its implications.

The development of various methods involving features akin to the base-stock method has added to the confusion. ~~By and large~~ these methods have adopted the general philosophy of profit computation underlying the base-stock method, while maintaining certain traditional practices with respect to balance sheet presentation.

PURPOSE OF THE PRESENT ARTICLE

The purpose of this article is to describe the important features of the base-stock method and what the writer believes to be some of the implications and fundamental concepts involved in it. Following this, an alternative procedure now in use, namely the stated reserve method, is presented for consideration in the belief that, as a practical matter at the present time, it is desirable to devote attention to alternatives which involve less drastic changes in traditional practice and yet provide the major advantages of the base-stock method.

The article is restricted to the possible use and effect of these methods in manufacturing enterprises where inventories constitute a relatively large investment. The inventory problems of the wholesaler or retailer are not considered.

THE CONCEPT OF A BASE STOCK

One of the fundamental concepts underlying the method is that a manufacturing company must have on hand at all times a considerable quantity of material in one form or another if it is to remain in business. This is necessary, due to the time factor on material in transit and in process of manufacture, and to the desirability of maintaining a supply of raw material to avoid delay in production and a supply of finished goods to meet demand promptly. The basic quantity necessary to meet these needs under normal operating conditions is known

[1] Also known as the normal-stock method

as the base stock, and this refers to a quantity which is subject to turnover and not to a stationary or reserve supply. Part of the base stock may in fact be a reserve supply which is not physically touched unless needed, but this is not a feature peculiar to nor necessarily a part of the base-stock method.

There are difficulties in establishing the quantity that should be accepted as representing the base stock in any given company. Moreover, the quantity is subject to change, just as our ideas as to the minimum salary on which we can live, change with the passage of time and with variations in our fortune. However, the difficulties are no greater than those faced in the many other areas of accounting involving judgment and common sense.

The problem is complicated also because there is no common agreement as to just what is meant by the term base-stock quantity. Practice is in agreement only in a tendency to use conservative amounts. Statements such as, "The base-stock quantity is that quantity necessary to thread the mill under normal operating conditions," convey the general idea but are not specific enough when it comes to the practical application of the base-stock method. This matter is a subject for much study and discussion in itself and will not be treated here at length, though, a few generalizations and expressions of opinion may be helpful in calling attention to the problem.

In the first place it is clear that the quantity taken as the base stock must be large enough so that the matter of its valuation is of real significance.

Second, the base-stock quantity should be below the average inventory quantity even when seasonal and cyclical variations are removed in arriving at the average. It is a basic quantity that is sought, not an average of the total inventory.

Third, although some companies have taken the lowest figure to which inventory quantities have dropped under adverse business conditions as representing the base stock, it is reasonable to suppose that in extremely subnormal years the inventory is likely to dip below what could prudently be accepted as the base-stock quantity in other years.

Finally, I believe that the upper limit of the base stock should be an average of the low points for inventory quantities (seasonal lows), computed over a period of years sufficient to be considered representative in the given case, leaving out years in which marked cyclical variations are present. This average of seasonal lows should be taken as the base stock in all except extremely subnormal years, during which the base stock would drop to the low figure suggested in the third point above.

In some companies there is at least one time during the year when there is practically no inventory on hand at all, and financial statements are prepared at the close of the natural business year rather than the calendar year. The base-stock method is not applicable to such cases and if these companies wish to adjust their yearly statements to the long run view of profits they must use some other procedure.

INVENTORY TURNOVER AND THE BASE-STOCK METHOD

Statements have appeared from time to time to the effect that the base stock is like machinery which a company has to have always on hand in order to operate. The analogy is an unfortunate one for, as Professor Sanders has said, "The suggestion that a minimum or normal inventory is a fixed investment of the same character as plant assets is ingenious, but not fully convincing . . . there is a fundamental difference, in that the specific goods of the inventory are sold and replaced between annual reports, whereas the identical plant assets are retained."[2] Such arguments can be avoided by the use of analogies that do not involve other balance sheet items. For example, inventory has been likened to a river the width and depth of which are subject to seasonal and cyclical variations. The maintenance of minimum or basic stocks is of as vital im-

[2] Sanders, T. H., *Problems in Industrial Accounting*, (New York, McGraw-Hill Book Company, Inc., 1930) p. 377.

portance to the life of a business enterprise[3] as is a minimum flow of water to the people who live by, and in various ways depend on, a river. An executive of a meat packing company expressed this idea as follows, "We have a river of meat flowing through our plant. At times it widens and then again it narrows, but we cannot stop it and still remain in business." Whether it is a river of inventory or of water, it is subject to turnover, and this applies to the minimum quantity just as it does to any other part of it. The important point is that a company of the type that we are concerned with here must maintain at least a minimum flow of goods through its plant.

There are some people who believe that the base-stock method is applicable only to industries in which, among other things, the rate of inventory turnover is relatively low. I do not believe this. Let us grant the existence of basic inventory quantities in two companies, one of which customarily experiences a low rate of turnover and the other a high rate of turnover. Using cost or market, whichever is the lower, as the basis of inventory valuation the basic inventories in both companies will, over the years in which prices are rising, rise in stated value from a low point to a high point. Since it is the purpose of the base-stock method to eliminate this unearned spread between the low point and the high point, and since the spread takes place in both companies, the method is as applicable to one company as it is to the other, though of course on other grounds the method may not be suitable to either company, or may be suitable to one and not to the other. The only difference the rate of turnover makes is that, in the company having a high rate of turnover the stated value of the basic inventory (under cost or market, whichever is the lower) reflects rising prices by taking many short upward steps, while in the company having a low rate of turnover the upward steps are fewer and wider. The distance between the bottom of the stairs and the top is of importance, but the number of steps and the height of the risers is not.

PRICING THE BASE-STOCK QUANTITY

Under the base-stock method the base-stock quantity is priced per unit at the same amount year after year for each type and grade of material. The unit prices are not averages; they are set as low as prices may be expected to fall in the future and are generally taken as the lowest prices experienced in the past. If at any time the market goes below the base price on a given item of material, as was experienced by some companies in 1932, a new base price must be adopted, else the inventory will be stated less conservatively than the traditional basis of cost or market, whichever is the lower, and if the situation continues long enough for the inventory to turn, it will result in inventories stated above cost and in the anticipation of inventory profits, both of which have been outlawed by tradition and are the antithesis of the base-stock method.

By maintaining the base stock at base prices, current production is priced, as far as material is concerned, according to current purchases, as though the base stock had not been touched. This may be visualized by the simple example of a pipe line for oil extending from Texas to New York. In order to have oil come out of the pipe at New York, oil must be kept running through the entire line. In other words, at all times there must be an inventory of oil in the line and this may be likened to the base stock. The quantity of oil within the pipe would be priced at the same amount year after year with the result that the oil leaving the pipe during a month would be priced the same as the oil entering the pipe during that month, without any allowance for the time lag in getting the oil from Texas to New York. This makes accounted costs more nearly in line with estimated costs on which selling prices are quoted; for in such industries as oil, copper, textiles, leather, and lead, estimated costs for purposes of price quotation are generally based on the current price for raw material and not on the actual cost of whatever lots of raw material the manu-

[3] A business enterprise in which the base-stock method is applicable. A discussion of the industries in which the method is most applicable is presented later.

facturer may have in stock. Except for the effect of any excess or deficiency of stocks from normal, the cost of goods sold is really based on replacement cost rather than actual cost. By this means inventory gains on the base stock are not taken as prices rise and consequently inventory losses are not reflected as prices fall.

THE BASE-STOCK METHOD DOES NOT PREVENT INVENTORY SPECULATION

This does not mean that the base-stock method prevents inventory speculation, for gains and losses are realized on inventories carried in excess of the base stock. Excess inventories are priced on the usual basis, at the lower of cost or market. If the base stock (i.e., base quantity) is temporarily reduced, the quantity withdrawn is credited out at the market price existing at the time of withdrawal. This excess credit (the excess being the difference between the market and base value of the quantity withdrawn) creates in effect a reserve sufficient to replenish the base stock at the price at which it was withdrawn. If the market changes between the time of withdrawal and replenishment, a gain or loss will be realized.

STATED INCOME UNDER BASE-STOCK METHOD APPROXIMATES PROFITS REALIZED IN CASH

The statement has been made by an adherent of the method that it causes stated income to be nearer to a reflection of profits actually realized in cash. By this it is meant that the method does not take inventory gains (which cannot be realized in cash, because they have become invested in the same quantity of inventory at a higher price) and avoids inventory losses (which are not cash losses, because the same amount of inventory can be replaced for a smaller outlay of cash). Or, looking at it in another way, current purchases represent cash outlay, and if current production is priced for its raw material content as though it came from current purchases, then stated income will be closer to profits actually realized in cash than would be the case if current production were priced for its raw material content on the basis of inventory figures representing the cash outlay of a previous period.

SUMMARY OF THE ADVANTAGES OF THE BASE-STOCK METHOD

Among the advantages of the base-stock method it is to be noted that the practice is consistent from year to year, in contrast to the possibilities of variation or intentional manipulation when inventories are arbitrarily understated. The method is simple to apply, in the sense that base prices are fixed and, as far as the base stock is concerned, a company is freed from the annual estimates in establishing "cost" and "market." Inventories are stated ultraconservatively in the balance sheet, with a correspondingly conservative figure for surplus. This, from the point of view of traditional practice, results in the creation of a hidden reserve which increases as prices rise and decreases as prices fall. With respect to the profit and loss statement, net income is computed on the basis of a long-range point of view which refuses to recognize short-run price gains and losses on the base stock, on the theory that inventory gains on the base stock figured in the traditional manner are not distributable, since they must be invested in replacing the same stock at a higher price, and, since they are unavailable, they should not be included in the computed profit. Once the base-stock method is established, and is understood, proponents believe that the management and stockholders are led to consider operations and profits from a long-range point of view, which is commendable in view of the rash expansion and speculation too frequently stimulated by short-run profits.

Regarding net income determination it must be admitted that we have become accustomed to the periodic computation of profit and are apt to forget that profit or loss cannot be determined accurately until an enterprise has come to an end. Even here we know the profit only in terms of dollars and not in terms of purchasing power. The original funds furnished for an enterprise are placed in various goods, services, or plant

and equipment which at varying rates, through charges to the goods produced and sold, are converted back to money plus an additional return if the enterprise has been successful. As conversion takes place, the funds received are to a large extent placed in further goods, services, or plant and equipment. Because the eventual convertibility of these things is unknown, the final profit or loss cannot be determined until they have all been converted.

In a seasonal business the profit or loss for any one month is rather meaningless, except by way of comparison with the budget, or with the results for the same month in previous years. The profits of the months during the busy season will be offset to some extent by inevitable losses during the dull season, and the shortest period in which the profits are of any significance is a period that covers both seasons. The base-stock method is in one sense an extension of this idea. Inventory gains on the base-stock are followed by inevitable losses, and the shortest period of real significance with respect to the determination of distributable profits in so far as they are affected by inventory valuation is the period over which these gains and losses have been washed out. This generally takes place over a period known as the business cycle, though within such a period there are fluctuations caused by seasonal factors and temporary maladjustments of demand and supply, and there is always an undercurrent of forces influencing the secular trend of prices. For numerous reasons some approximation of the operating results for short periods, such as a year, is desirable, but under the base-stock method stated profits for the year are exclusive of inventory gains and losses on the base-stock and, it is believed, reflect more nearly the contribution of these short periods to what will prove to be the profit or loss in the long run.

There are minor technical difficulties involved in the method, but no more so than are to be met in valuation at cost or market whichever is the lower. There are difficulties involved in establishing the quantity that should be considered as the base stock and in selecting the base prices, but these can be established with sufficient accuracy, recognizing the importance of judgment and good faith, by any company which has been in existence over the period of a business cycle and has maintained reasonably accurate inventory records.

INDUSTRIES IN WHICH THE BASE-STOCK METHOD IS MOST APPLICABLE

It is well known that the base-stock method is not suited to all industries. There are some industries in which it just does not fit and there are others in which the difficulties encountered would nullify any advantages in the method.

I believe that there are four main requirements if the method is to be used to best advantage:

First, the industry must be one in which the spread between raw material prices and finished goods prices is relatively constant during the long upward and downward swings of prices, though the spread may be larger on the way up than it is on the way down, and though there may be many temporary maladjustments to upset the evenness of the spread. Thus the method would not be applicable to raw material producers since their costs are relatively fixed, or at least do not rise in proportion to the prices received from the sale of materials while prices are rising, nor do they fall proportionately when prices are falling. Also, there are industries serving the consumer with products on which the selling price remains relatively fixed while raw material prices fluctuate considerably, and the base-stock method would not appear to be well suited for the use of such industries.

Second, the investment in inventory should be large relative to other assets.

Third, the inventory should consist largely of a few basic materials.

Fourth, it should be possible to convert material in all stages of production to terms of units of raw material.

The method is most applicable to manufacturers, fabricators, or converters in industries such as oil, rubber, textiles, leather, chemicals, lead, copper and other metal in-

dustries. It is not denied that one or more of the alternatives of the base-stock method may be equally applicable to these industries or more applicable to other industries.

OBJECTIONS TO THE BASE-STOCK METHOD

Some of the difficulties involved in the base-stock method have been considered above, and it was stated that these difficulties are no greater than those to be met in the common basis of valuation at cost or market, whichever is the lower. It was also suggested that the method is not applicable to all industries, though it is applicable to a large number of important industries.

Granting, in a given case, that the method is applicable, and that the technical difficulties can be met, what are the objections to adopting the base-stock method? First, though this is not an objection to the base-stock method, it cannot be over-emphasized that method in itself is not enough. True conservatism and stability cannot be achieved by a mere change in bookkeeping procedure, and the adoption of the form without the spirit could easily result in either unwittingly or knowingly covering recklessness in other areas by the camouflage of advertised conservatism with respect to inventory valuation. No set of books will make the grasshopper other than a grasshopper.

Second, in the eyes of those who are firm followers of traditional practice, balance sheets prepared under the base-stock method show inventories grossly understated, and to this extent present a false picture of the working capital position.

Third, also in the eyes of the traditionalist, the failure to disclose, and by their omission to deny the existence of, gains and losses on the base stock in an annual statement of profit and loss which, because of the stated period it purports to cover, is primarily a short-run picture, is misleading and contrary to fact.

The second and third points involve not only an immediate issue of full disclosure versus nondisclosure, but also the problem as to when a profit or loss has in fact been realized and the manner in which profits and losses should be shown in the statement of profit and loss. Expressed in another way, these are problems in method, in philosophy underlying income determination, and in the psychological reactions of stockholders and executives to information presented in the financial statements.

With respect to presentation in financial statements, I think we can agree that traditional practice has placed undue emphasis on balance sheet considerations and has in fact made the profit and loss statement subservient to the balance sheet. Under the base-stock method the emphasis is reversed and the balance sheet is made subservient to the profit and loss statement. Such a reversal is too drastic to be quickly accepted even if it were otherwise desirable. It would appear more practical to seek to improve the status of the profit and loss statement with the aim of putting both statements on their own feet, while recognizing their mutual dependence.

Many who believe in the base-stock idea believe that such drastic departures are necessary as a matter of psychology, if stockholders and others are to adopt the long-range point of view with respect to income determination. While this is an ingenious method of dealing with stockholders, it does not in itself change their point of view. Such a change can come about only through the slow process of education, and this would appear to be fostered better by a policy of full disclosure rather than by one of nondisclosure. Moreover, the important point at the present time is to arouse the interest of those executives and accountants who are concerned with matters of accounting policy in the corporations which they serve either as employees or consultants. Assuming that substantially the same results can be achieved, it should be easier to encourage action on the part of these men by arousing their interest in methods which flow with the current of tradition rather than against it.

With respect to the profit and loss statement, the present aim should not be the denial of any part of the profit or loss, but rather the clarification of the nature and sources of profit and loss. Its purpose should not be merely to show only the final profit that can be looked upon by the stockholders

as available for dividends, since dividend policy involves a good many considerations other than the current stated profit. Neither should the stated profit or loss necessarily coincide with that reported to the government for tax purposes. Despite the apparent liberality of the general rule laid down by the government with respect to inventory valuation, the practices suggested in various articles of the regulations, designed as they supposedly are to accord equitable treatment to all concerned, and to facilitate the collection of revenue for a specific period, are not necessarily compatible with policies which a company may find desirable in its own accounting.

Up to the present time the government has not allowed the base-stock method in the computation of income on tax returns. The tax aspects of inventory valuation involve many considerations and I shall not go into them here for I am more concerned at present with inventory valuation as it affects a company's own records and statements as distinct from its reports to the government. However, I would like to say that it does not seem to me to be either just or correct for the government to assume that accounting procedures which are acceptable to a majority of companies for their own use should thereby be acceptable to the government for tax purposes. This results both in making specific use of procedures which were developed in good faith for other purposes, and in denying the use of other procedures which may be more equitable from the tax point of view and more satisfactory for use in particular companies or industries.[4]

ALTERNATIVE PROCEDURES WHICH MINIMIZE THE OBJECTIONS TO THE BASE-STOCK METHOD

There are several alternatives of the base-stock method, some in use and some merely proposed, which at least minimize the objections stated above, and should prove attractive if given adequate publicity and support. Professor Ross G. Walker, in an admirable contribution to the literature on the base-stock principle,[5] has among other things illustrated some of these alternatives and has pointed out their essential underlying similarity of purpose despite differences in method. I shall not attempt to compare these alternatives here, but shall rather try to see what might be done to achieve the underlying purposes of the base-stock method with a minimum of change in traditional practice.

Some companies have in the past protected themselves by arbitrarily understating inventories and creating hidden reserves which have been used to bolster earnings during lean years. Generally the stockholders have been told that this was being done, without any indication as to the amount of such reserves. This is a type of paternalism which borders on misrepresentation, and, while it is true as a general observation that stockholders must place their faith in the management, they should be entitled to a more visible accounting of the stewardship. It is to be hoped that as a general goal we shall seek methods which provide full disclosure rather than nondisclosure.

BRIEF DESCRIPTION OF THE STATED RESERVE METHOD

The stated reserve method used by some companies provides for the computation of income according to custom, with inventories valued at cost or market, whichever is the lower, after which a visible deduction from income is made for the purpose of building up a stated inventory reserve. The amount deducted is in essence the book gain on the base-stock. Thus the profit and loss statement shows the short-run profit with a visible adjustment so that the final stated profit represents the long-run contribution of the period. Under conditions of falling prices income is first computed on the customary basis, after which there is shown as an adjustment, the amount released to income from the reserve to cover the book loss for the period on the base stock.

[4] For an excellent presentation of inventory problems, including tax aspects, see "Present-Day Problems in Inventory Valuation," by Maurice E. Peloubet, *National Association of Cost Accountants Year Book*, 1936, pp. 164–187.

[5] Walker, Ross G., "The Base-Stock Principle in Income Accounting," *Harvard Business Review*, Vol. XV, No. 1, pp. 76–94.

If a corporation is willing to create a stated inventory reserve of this type the question then arises, "How large should the reserve be, and how much should the adjustment be in any given year?" In the first place the inventory reserve should be regarded as a protection to proprietorship only in so far as proprietorship is affected by fluctuations in inventory values. It should not be used as a catchall to provide for any and every contingency which might be expected to arise. The inventory reserve, then, should be such an amount as will cover the expected loss on inventories, and from the long-run point of view this should represent as of a given balance sheet date the difference between the value of the inventories as stated in the balance sheet and the same quantities valued at low base prices experienced in the past, to which prices are likely to descend sometime in the future. The addition to or withdrawal from the reserve, and the concomitant adjustment of stated income for the year, should be such an amount as would bring the reserve up or down to the desired amount as determined in the manner described in the previous sentence. There is one important qualification to what has just been stated: only the base quantity of inventory should be used in determining the amount of the reserve and adjustments thereto. The excesses or deficiencies from the base quantity are short-run propositions over which management has some control, and gains or losses realized upon them should be allowed to come into the profit and loss statement without adjustment, although it would be illuminating if corporations were to show such gains or losses as separate items in the statement.

A simple illustration may serve to clarify this stated reserve method. Suppose that a company wishes to start the method at the close of the present year. It makes a study of its past records of material quantities and establishes the base quantity of each type of material handled. The base value of these quantities would then be established by applying to the quantities the lowest prices experienced in the depths of the depression for the various materials handled. Let us suppose that the total value so computed is $25,000,000. Let us suppose also that inventories on January 1, 1937 appeared in the balance sheet at cost, market being above cost at that time, and that the total amount was $35,000,000. The inventory sheets on which the figures were compiled to arrive at this total would be reviewed to determine the quantity of stock in excess of the normal stock on hand January 1. This excess stock would then be priced on a first-in first-out basis, assuming it to have come from the most recent purchases. If the total inventory had been priced by the use of weighted average costs, then the cost of the excess inventory would now be computed on that basis. If either of these methods involved a prohibitive amount of work in a given instance, the same result for all practical purposes could be achieved by a simple proportionate division of the cost, assuming that the total cost could be established for each type of inventory, in accordance with the ratio of the base-stock (quantity) to the total stock (quantity) of each type of inventory on hand. Let us suppose that using whichever of these methods is most applicable to the assumed case we arrive at a figure of $5,000,000 as the value, at cost, of the excess inventory. The difference between this and the total stated inventory of $35,000,000 would give $30,000,000 as the value, at cost, of the base stock. In turn, the difference between the $30,000,000 cost and the $25,000,000 base value would represent the amount of the inventory reserve that should, under the stated reserve method, have been in existence at the beginning of the year.

The next step would be to create this reserve by charging Surplus $5,000,000 and crediting Inventory Reserve for the same amount, on the grounds that this reserve should have been established by charges against income in the past and the current year should not be charged for the creation of this part of the reserve. There are some who would prefer that this amount be charged to the current year, on the grounds that it will eventually be used to relieve the income account, and if it is never shown as a charge against income, any summary of the stated income over a period of years would be mis-

leading. This is only one phase of a very broad subject which we shall not attempt to explore here. Suffice it to say that this part of the reserve can be created by either method, and if it is established from surplus, it should be shown clearly in the published surplus reconciliation, and likewise if it is charged against the income of the current year, it should be shown as a separate and distinct item. In any event, it is clear that the sooner the stated reserve method is started after low prices have been experienced, the smaller will be the required adjustment, and the more effective will the stated reserve method be in adjusting annual statements to the long range point of view.

Whether this part of the reserve is created from surplus or by a charge against current income it would undoubtedly turn surpluses into deficits in many companies, and indeed the executives of some companies who have been sympathetic toward the normal stock idea have done nothing about it for this very reason. This is another matter which we cannot deal with here without getting far afield. Its solution is bound up with individual circumstances and while generalities are not particularly helpful, I am inclined to believe that though many companies might meet the problem with an adjustment of the capital structure, it would be preferable to allow the deficit to stand as a revelation of fact, to be cleared only by the gradual accumulation of distributable profits.

To continue with our example, let us assume that at the end of the year 1937, market is still above cost and that the physical inventory taken in the customary manner is priced at cost; amounting in total to $40,000,000. Using the same methods described above it is found that $7,000,000 of this represents the excess inventory, leaving the base stock at $33,000,000. The difference between the base value of the base stock ($25,000,000) and its balance sheet value (33,000,000) calls for an inventory reserve of $8,000,000. A reserve of $5,000,000 has already been created in accordance with the adjustment indicated above, which means that an increase of $3,000,000 should now be made by charging current income and crediting the reserve. The profit and loss statement for the year would be prepared in the customary manner except that the $3,000,000 charge would be shown as a separate deduction before arriving at the final profit or loss.

The balance sheet would be shown in the customary manner, with inventories stated at $40,000,000, except that an inventory reserve of $8,000,000 would be shown on the liabilities side.

Under conditions of falling prices the reserve would be decreased and final current income increased by the amount called for as determined in the manner stated above. Thus, if the required reserve was $25,000,000 and the reserve stood at the time at $30,000,000 an entry would be made, debiting the inventory reserve $5,000,000 and crediting Profit and Loss for the same amount. In the profit and loss statement the $5,000,000 would be shown as a separate addition before arriving at the final profit or loss.

The technique employed in arriving at the amount of the reserve, and the adjustments made to it, is a matter which should be subjected to flexibility, and the example presented is simply one possibility.

The balance sheet value of the base stock, and correspondingly the amount of reserve required, could be established with less detail by the use of price indexes, providing that they were used with care. One way in which this could be done would be to establish apart from the books of account the base value of the base stock broken down in accordance with the major raw materials handled. That is, for example, the base stock would be determined as so many pounds of lead at a given base price, so many pounds of tin at a given base price, etc. Using the base prices as 100, an index number would be established on the balance sheet date for each major raw material handled. For the sake of conservatism it would be preferable to base the index number on the weighted average cost during the year, or the market price on the date of the balance sheet, whichever was the lower. Having established the index numbers, each number could then be applied to the base value of the base stock of the particular type of material which it represented, to arrive at its balance sheet

value. Thus if the base value of the base inventory of lead was $10,000,000 and the index for lead was 110 on the balance sheet date, the balance sheet value of the base stock of lead would be $11,000,000 and the required reserve for lead $1,000,000. If a company found that the prices of its major raw materials moved together a combined index would be satisfactory.

The stated reserve method is used, for example, by Swift & Company, Procter & Gamble Company, and the Endicott Johnson Corporation, though it is not implied that they necessarily use the technique presented in the example above. The method involves the same concepts of base quantity and long-run profit as found in the base-stock method, though both the reserve and the adjustments to it are stated rather than hidden. It need not have the rigidity of the base-stock method; that is, minor adjustments could be ignored in any given year, particularly after the reserve has reached a high point and a minor recession in prices takes place which is regarded by the directors as only a temporary condition. As a general observation, however, it may be said that the semi-automatic feature of the base-stock method is one of its real advantages, and no stated reserve method can depart from this very far without losing the essence of the plan and becoming merely a means for the manipulation of stated profit or a permanent impounding of inventory gains.

With respect to the balance sheet, the stated reserve method allows inventories to be shown on the customary basis of cost or market, whichever is the lower, while the reserve is shown as a separate item on the liabilities side of the balance sheet. This provides all that is necessary as far as protecting proprietorship from inventory gains and losses on the base stock and at the same time allows the balance sheet to portray what the traditionalists believe to be a more accurate picture of the current working capital position. Enthusiasts of the base-stock method tend to minimize the working capital aspects of the problem. It cannot be denied, however, that short-run inventory profits are vital to the maintenance of the base quantity of inventory in the face of rising prices. When inventories are shown at base prices, an artificial picture is presented, for, although the current liabilities are shown at their full amount, the wherewithal to meet them is shown at an artificially low figure. It is a firmly established principle that inventories should be valued at their debt-paying ability, which, for the sake of conservatism, should be shown at no greater than cost, and should be shown at market when market has fallen below cost. One can hold to this principle and still, through the use of a stated reserve, obtain the major advantages of the base-stock method.

CONCLUSION

In conclusion, the present revival of interest in the base-stock idea, although stimulated to some extent by tax implications, is indicative of changes that are gradually taking place in our thinking on problems of income determination. In this as in other areas of our industrial civilization we are coming of age, and short-run practices which were in keeping with our rapid growth are quite likely in the future to be adjusted to a longer-range perspective. In such a picture it appears that the base-stock idea is with us now to stay, and the future will see it playing a substantial part in accounting and financial policy with respect to income determination. The rapidity with which the idea takes hold depends upon the speed with which those business men and accountants who determine the accounting and financial policies of the corporations which they serve can be educated to it. The practical application of the idea depends upon their willingness to put into practice whatever method is attractive to them. The writer believes that, even if it had no other disadvantages, the base-stock method in its strictest form represents too drastic a change in traditional methods to prove widely attractive to such men, at least at the present time. The major advantages of the method can be obtained by supplementing rather than supplanting traditional methods, and the stated reserve method is one way in which this can be accomplished.

BASES OF VALUATION IN GERMAN CORPORATE BALANCE SHEETS

E. Kosiol

THE VALUATION OF FIXED ASSETS

Valuation principles which must be followed by German corporations are prescribed in the new German Company Law approved January 30, 1937, and made effective in October. This law, although bearing some relation to the present National-Socialist regime, is for the most part an evolutionary development which started years ago. Further comments on the German Company Law will appear in a subsequent issue.

Acquisition or production cost is prescribed as the maximum value for all fixed assets. The language of the present German Commercial Code is unequivocal on this point.

By "acquisition cost" is meant the amount of actual expenditures on the fixed asset up to the moment when it becomes ready for use in operations. Besides the net purchase price this form of cost includes all direct overhead expenses; for instance, transportation costs, insurance premiums, import duties, commissions, cartage expenses, and installation costs. Allowances such as rebates and cash discounts are to be deducted. Acquisition cost thus represents so-called "cost installed."

Special rules, which are valid also for current assets, exist for determination of production costs of fixed assets. First, depreciation (wear and tear and other value decreases) may be included in cost to an appropriate extent, as also general and administrative expenses. The propriety of adding supplementary charges in the cost of production depends on the principles of good accounting. Generally the law limits supplementary costs to those incurred during the production period. Expressly forbidden are marketing costs, such as those for advertising, crating, shipping, etc., or any portion of general and administrative expenses that are applicable to marketing, as, for instance, depreciation of property used in marketing operations, rent, light, and heating of shipping rooms. Furthermore, incidental costs, particularly risk reserves, extraordinary expenditures, and taxes based on profits should not be capitalized. Interest on borrowed funds, including interest during construction, discounts and rebates, may be included, but not interest on proprietorship capital.

With regard to the regulations concerning valuation of fixed assets two types of situations should be observed.

In the case of wasting fixed assets, depreciation (depletion) is compulsory if the present value of the property is below acquisition or production cost. Such depreciation is determined according to the ratio that the individual fiscal period bears to the expected total useful life of the asset. Hence, normal depreciation, in the sense of a current expense, is made a minimum regulation. The law does not require a write-off for abnormal or extraordinary depreciation. Omitted or insufficient depreciation, however, must be made up after ascertainment of the existence of such a condition. On the other hand, under some circumstances a reduction or even omission of current depreciation is permitted where there has been excessive depreciation deducted during prior years. Both situations come about because of the difficulties in accurately estimating actual life duration in the light of probable future events and influences.

The bookkeeping technique of recording depreciation, in view of the great variety of practices, is not regulated by law, and must, therefore, be determined individually according to the principles of good accounting. The choice among the various methods (constant, decreasing, or increasing depreciation) is optional according to the existing circumstances. Direct deductions on the asset side of the balance sheet and indirect correction of value on the liability side are both expressly mentioned in the law as permissible.

However, the use of a single depreciation reserve applicable to more than one asset

has been modified by the requirement that such a reserve be spread, at least in the annual report, according to the asset items that it affects. By this new regulation it is intended, according to the preamble of the bill, that the amount of the depreciation and value corrections be apparent without reference to the previous report. If deductions are made on the asset side, this information is shown automatically becuase the code requires the separate listing of asset additions and deductions.

Special valuation problems arise, e.g., in the case of a new building constructed out of the proceeds of fire insurance, or in the case of real estate acquired through forced sale.

As regards other items of fixed assets (intangibles, affiliated-company holdings, securities), there exists no obligation to amortize them; the proper treatment is, rather, made dependent on the principles of good accounting. Accordingly, write-offs become necessary in case of actual losses that probably will not be made good, or in case of a permanent decrease of real value; as, for instance, with doubtful affiliated-company holdings or securities, and, under some circumstances, exchange-quotation losses or reduced yield on fixed interest-bearing securities.

Business-development costs and goodwill arising from payment of an unnecessarily high price for a business are also fixed-asset values which are necessarily subject to write-offs. Business-development costs represent promotion and expansion costs that are effective for the total life of the enterprise, as, for example, expenses relating to preliminary dissemination of information, creation of a marketing organization, development of processes or markets, technical research, planning, and interest during construction.

The foregoing revives organization and administration expense, the capitalization of which was forbidden in Art. 239a of the supplementary corporation law of 1870 and also in Art. 185a of the supplementary corporation law of 1884. It remained non-capitalizable in Art. 261 (4) of the Commercial Law code, but was finally dropped entirely in the supplementary corporation law of 1931. By now permitting capitalization, the corporation law has expressly recognized dominant accounting and legal concepts, and the need for relieving the income statement, which had been carrying the frequently considerable costs of years of development expenditures.

On the other hand, expenses for establishing the corporation and for raising capital must not be capitalized. The same is true with reference to original goodwill calculated as excess book value by ascertaining the capitalized income value of the whole business.

Discount on loans payable, which is to be shown as a deferred charge, is likewise subject to amortization. It may also be shown on the asset side as a value correction of the corresponding liability. Furthermore, there is in use the term, "asset reserves," which applies not incorrectly to all expenses carried on the asset side, and which facilitates understanding the temporary character of such values. In this category also belongs the capitalization of losses, the practice of designating them assets being permitted on the basis of a special legal regulation for the purpose of distributing them over several years; for instance, the devaluation account according to Art. 5 of the "gold-balance-sheet decree" and Art. 2 of the "decree for extraordinary accounting relief," and the revaluation equalization account according to Art. 81 of the revaluation law.

THE VALUATION OF CURRENT ASSETS

The principle of minimum value [lower of cost or market] applies to all current assets. The previous enumeration, as current assets, of securities and other assets which are not permanently required for the business conduct of the company, as well as of merchandise and the company's own shares, is now replaced by reference to the corresponding section of the classification ordinance. By this a clear dividing line has been drawn for valuation. In special cases deviations based on general principles may result; for instance, land held by real-estate

companies or subsidiary holdings of financing companies are to be considered current assets and valued accordingly.

Under the regulations for fixed assets, determination of the cost to produce of a fixed asset represents a deviation from the principle of minimum value inasmuch as the amount of fixed costs which will be included in such production cost is dependent on the current rate of operations. As regards goods manufactured for sale, however, in a time of subnormal operations one can generally expect depressed prices for such goods, and the result is that charging the full amount of fixed costs to merchandise produced would cause overvaluation. In the latter type of case, therefore, that portion of the fixed costs which is not covered in the market price has to be charged off. This method of accounting theoretically leads, in the production of both merchandise and plant, to the determination of standard costs based on normal rates of operations.

A further write-off on merchandise inventory may be necessary, independent of minimum value, if the prices existing on the closing date are subject to an artificial influence under extraordinary circumstances or agreements. In particular, deviation from the use of current value is desirable when a long view of future price movements permits conclusions to be drawn with a fair degree of assurance.

Among the securities classed as current assets, principally the so-called cash securities, which are those held for resale or for temporary investment of liquid funds, belong tax-bonus certificates, interest-payment certificates, and scrip. In contrast to securities classed as fixed assets, these are to be valued on the basis of unconditional and full consideration of recessions in market quotations.

The company's own shares and those of a dominating company are always to be set up according to the minimum-value principle even if they have been acquired for permanent possession, with the exception of unissued shares, company shares which belong to somebody else for the account of the company (excluding those in possession of a trustee), and shares for which the company has assumed a price guarantee. If occasion arises, the claims of the company against a third party are to be set up as assets.

In the valuation of outstanding debts secured by land register, the deciding factor is the personal claim in its actually value-dated amount with due consideration given to the property of the debtor. In the case of land obligations and mortgage annuities the personal claim is replaced by the dated nominal valuation. Valuation of debts due to production and delivery of goods is likewise secondary according to Par. 40 of the Commercial Law Code. Debts against affiliated parties cause particular difficulties, since here true merchandise debts, frozen loans and accounts, as well as profit-and-loss transfers, may be intermixed.

THE VALUATION OF LIABILITIES

On the liability side of the balance sheet the share capital is to be set up at its full nominal value. Neither holdings of the company's own shares nor uncollected amounts of the subscribed capital stock may be deducted.

Uncollected subscriptions have the character of claims of the corporation and, therefore, are to be carried as assets, in accordance with Art. 40 of the Commercial Law Code, at their real value. In such cases the payment capacity of the stockholders, according to Art. 58, or of the preceding parties who must indemnify, according to Art. 59, is to be considered. As a point of departure the sales value of the shares less consequent sales costs can also be considered. Uncollected subscriptions of full value, due and unpaid, may also be regarded, on the asset side, as a value correction to the share capital.

The provision for reserves, as far as the legal reserve is concerned, is determined by Art. 130, particularly in the following respects:

1. At least 5% of the annual net profit up to an amount equal to 10% of the capital stock, or to a higher limit if stated in the by-laws;
2. The premium arising from each capi-

tal-stock issue above par, less the expenses therefor;

3. The premium arising from conditional increases in capital stock through issue of convertible obligations above par, less all expenses therefor;

4. Additional contributions of stockholders in consideration of grants of priority rights;

5. The accounting excess arising from simplification by capital reduction;

6. The nominal amounts of shares redeemed for the purpose of simplification by capital reduction.

The accounting excess arising from regular capital reduction, according to Art. 178, section 2, has the character of an extraordinary legal reserve that must be set out separately as a restricted or blocked reserve.

The amounts of voluntary reserves are determined according to their special purposes by decisions of the officers or resolutions of the stockholders.

Because of the uncertainty as to amounts and due dates, accruals are subject to careful estimates according to the principles of good accounting. In the case of contractual pension obligations, insurance methods are to be used in determining the appropriation to the reserve account.

Value corrections are contra items against the corresponding assets on which they are based. Their amounts are determined by the regulations and by principles that are in force for the corrected asset items.

As to commitments, valuation principles similar to those applicable to debts will govern, according to Art. 40 of the Commercial Law Code. In the case of commitments, however, the rule is concerned with maximum value limits, while in the case of debts it is concerned with minimum-value limits.

A special regulation exists for loans payable, which are to be credited at their repayment amount. This requirement may give rise to a discount or a premium, which is to be written off during the duration of the loan, theoretically in proportion to the amount of the related loan outstanding.

THE PROBLEM OF SECRET RESERVES

All questions of balance-sheet valuation lead to the pivotal point of secret reserves. They are a consequence of value limitation by upper and lower limits and of the valuation bases chosen within the framework of such limits. An accurate determination of balance-sheet values according to a uniform viewpoint, such as the organic balance-sheet theory of current values, does not leave any room for secret reserves.

As an essential part of good accounting the minimum-value principle effects the equalization of current losses in order to preserve capital by the cautious determination of values. In this manner secret, but legal, statutory reserves arise that, as opposed to the use of costs of acquisition, cause the profit-and-loss account to reflect not only realized profits, but also unrealized losses. Thus minimum valuation leads to a realization principle that is modified by the principle of precaution.

Under this loss-equalization principle only are secret reserves formed which represent, in a sense, real additional capital, but which are neither determinable nor recognizable in the accounts. Generally it is always possible to state secret reserves openly.

Secret reserves are valuation reserves. They arise through undervaluation of assets or through overvaluation of liabilities. This process can take place automatically, *i.e.*, without specific action, as, for instance, through a market-value increase, or through an omission, such as failure to dissolve a reserve which has become superfluous. Secret reserves, however, can be created also through bookkeeping adjustments for valuation. In both cases the formation of secret reserves can come about unconsciously or intentionally. The same possibilities occur in the dissolution of secret reserves.

Undervaluation takes place in fixed assets through writing off depreciation without the actual occurrence of a corresponding value diminution or through a depreciation write-off based on only temporary value diminution, without actual need for spread-

ing expenditure, through failure to change the accounts for increased value of the asset, or, principally, through an excessive write-off or unjustified extraordinary write-off. In the case of current assets it occurs through setting values below those required by the principle of minimum value.

Secret reserves on the asset side arise particularly from financing operations, as, for instance, from recording below their full values the physical assets acquired through mergers, or when reorganizations go beyond the required capital reduction in the devaluation of the assets. The omission to capitalize long-term expenses (major repairs, new acquisitions, large-scale advertising) belongs in the same category.

Overvaluation on the liability side is greatly restricted by existing regulations. Excessive asset value corrections on the liability side really represent undervaluations of the assets. An excessively high reserve provision or a reserve kept alive despite disappearance of the reason for its existence is possible, and, due to the nature of such estimation is frequently unavoidable. The principle of balance-sheet truthfulness is strictly preserved as to liabilities by the prohibition of offsetting claims, by the compulsory separation of reserves from value corrections and accruals, and by the prohibition of fictitious creditors. Secret reserves among liabilities are, therefore, still possible, but are found practically only in the case of disputed liabilities or foreign-exchange liabilities.

The dissolution of secret reserves means their conversion into open capital, *i.e.*, reserves or surplus. The principal causes of spontaneous dissolution lie in value diminutions down to book value, in the disposal of the capital goods for which the reserve is carried, in the ordinary progress of depreciation, and in sales transactions. Since in most cases it requires special action to preserve existing secret reserves as such for the future, the choice is materially determined by the dissolution procedure, *i.e.*, the continuity of the reserve and the possibility, form, and duration of the dissolution.

A long-term continuance of secret reserves, with distant dissolution, exists with regard to land, affiliated holdings, and investment securities. Aside from automatic dissolution by value diminution and conscious increase in value, secret reserves generally appear only in the proceeds of disposal. Also, in the straight-line depreciation of fixed assets spontaneous dissolution takes place only after the completed depreciation write-off, provided one measures the annual charge according to the original book value of the object. Likewise, secret reserves can be kept alive for long periods in accrual accounts.

In contrast, secret reserves in the case of geometrically degressive depreciation of fixed assets do not continue for long. Since the annual charge for depreciation of the book values becomes increasingly lower, dissolution of the secret reserve has the effect of increasing profits over long terms.

Since base-stock inventories have their value fluctuations neutralized as regards profit-and-loss accounting, they have the character of fixed assets and make possible a long-enduring continuance of secret reserves against them. On the other hand, current assets in general, but particularly merchandise stocks, securities, bills of exchange, foreign-exchange claims and commitments, are characterized by a strong instability in their secret reserves. The dissolution of such reserves occurs, in the absence of special attention, by continuous disposal in the selling process or by revaluation on the basis of minimum value at the annual closing. This attribute, contrary to that of depreciating assets, is common to all objects. With every physical inventory the question arises as to whether and to what extent one wants to preserve or establish secret reserves, and this fact is frequently responsible, in practice, for the preference of inventories as the location of secret reserves.

The dissolution of secret reserves is limited by the principle of value continuity, according to which the last related balance-sheet value should not be exceeded, but should

represent the maximum value. The amounts becoming free by dissolution of secret reserves are to be stated openly as extraordinary profits in the profit-and-loss account.

Secret reserves are currently recognized as legally admissible by the Supreme Court. This existing state of law is also present in the corporation law and has been supported in the explanatory memorandum with the same arguments as in the amendment of 1931. H. H. Walb has recently expressed the opinion that, in principle, the limited contestability of secret reserves should be permitted and adhered to, in accordance with Art. 198, section 2 (previously Art. 271, section 2, sentence 3 of the Commercial Law Code). These views have met with little enthusiasm since they do not give consideration to the real need of industry for the acquisition-value balance sheet, rather than the higher present-value balance sheet, within the framework of good accounting. Also the latest Supreme Court decision, June 26, 1936, in the suit against the Adler works has emphatically pointed out that secret reserves, even in reorganizations, are permissible within reasonable commercial discretion in regard to the general condition of the enterprise and in the interest of continued success of the policies adopted.

ERRATUM

Gabriel A. D. Preinreich has called attention to an error appearing in his article, "Valuation and Amortization," in the September Review. The sentence commencing "The result . . . " in the second line on page 214 should read as follows:

> The result, divided by the ordinate of the mortality curve, is plotted horizontally, by adding it to the age on the level of the corresponding chance of survival.

DEPRECIATION OF INDUSTRIAL PLANT

Ragnar Liljeblad

In the first issue of "Nordisk Tidskrift for Teknisk Økonomi"[1] for 1936 there appeared an article by the author under the same title as the above. In the following appears a more complete description of the same subject dealing mainly with the most economically advantageous lengths of the periods of useful service respecting depreciation of an industrial plant and at the same time the question of the best distribution of depreciation from year to year.

The highly important questions of varying price levels and monetary values will not be touched upon, but in this connection reference may be made to previous statements by the author in which these matters are dealt with (see, for example, the publication of the Lecture "Some Fundamentals of Industrial Economics," in Nos. 35 and 36 of "Teknisk Tidskrift" for 1933).

BASIC ASSUMPTIONS

There are two main aspects of the problem. On the one side a general survey is necessary in order to arrive at a correct assessment of what may be the economically most advantageous periods of use—in other words, the depreciation periods—of the different forms of fixed production material, and in association with this question the correct depreciation must be allocated to the different years of the period of use; and on the other side, in its application to any concrete case the question must be answered: "Is the time now ripe for the purchase of this or that particular new machine?"

The latter question can be adequately dealt with only after arriving at definite conclusions in respect of the first. It is first necessary to get a bird's-eye view of the whole period of depreciation before attempting to answer concrete questions as to what is the correct procedure at any given time.

Consider, for example, a machine tool—or preferably a group of similar machine tools—and let the purchase price be denoted by K. As time elapses from the date on which these machines were purchased, designs are continually being improved and the production capabilities of new designs and the latest models are always being increased. To maintain the same output, therefore, fewer machines will be required. At the same time, however, as machines become even more perfected and automatic operation more fully applied, we can make the assumption that the cost of replacing a group of machines for the same output will still remain K. This assumption should not be far from the truth. If we are going to take account of the disposal value of the plant when it comes to be replaced, under static conditions K can be assumed to be the difference between the purchase price and the disposal value. In most cases, however, when the time comes that replacement of plant can no longer be delayed, it will be found that the disposal value is practically negligible: often it does not even suffice to cover the cost of scrapping and it seldom exceeds 5% of the original purchase price of the material when new.

It can be admitted as inherently true that the capital costs involved by the purchase of a new machine must be met by the saving made possible in running expenses and general maintenance.[2] The latter costs can be accurately enough assessed in any given case. What, however, of the new costs involved? It is clear that the interest on the whole of the purchase cost will have to be

[1] *Scandinavian Review of Industrial Economics.*

[2] The "life" of a machine is frequently spoken of; actually the term in this application is quite meaningless and arises from a false analogy with living organisms. A living being cannot be repaired and given a new lease of life when once his natural life has come to an end, but a machine can always be kept functioning by continued repairs. One obvious example of this is the old steam locomotive which we see still in (almost certainly highly uneconomical) service, with most of its parts at least once, if not many times, repaired or replaced. Naturally the existence of a machine can be brought to a definite end by its complete destruction, e.g. by fire or loss at sea, but such eventualities are covered by insurance and have no connection with depreciation.

added, but what is to be done with the factor which, at any rate for the shorter periods of useful life, is of more importance, namely the depreciation?

Using, for example, a constant annual rate of depreciation evenly applied over the whole of the estimated depreciation period, must it not be correct to reckon with the interest charges during the first year of a new period being met by the saving in maintenance and running expenses resulting from the installation of the new machine? The rate of depreciation being unvarying, it will necessarily be the same during the final year of one period as during the first year of the following. But say that we postpone the purchase of a new machine some years beyond the expiration of the depreciation period of the old machine which is destined to be replaced; we will then no longer have any depreciation to reckon with, but when we finally do purchase the machine we will have both the interest and depreciation to pay. Which is correct? Should the saving in maintenance and running expenses be set off against the new interest charges alone or against the interest plus depreciation?

The question cannot be settled, however, by any definite answer one way or the other; even if we decide to include the depreciation, there still remains the fixing of the amount to be included under this heading for purposes of comparison. It can by no means be assumed *a priori* that it will always be correct to calculate with the same amount of depreciation for each year of a given period: as will be shown below, such an assumption is quite incorrect. Suppose we decided to reckon with no depreciation at all during the first year. The resulting small cost of the replacement may then be thought to have justified an earlier replacement of the old machine. If this had been done, however, it is obvious that in the next and succeeding years the position would be quite the reverse, and it would be found that the old machine had been got rid of too soon. Now it is very seldom that circumstances are so unusual as to allow one to dispense entirely with depreciation charges even during the first year. On the other hand, it is quite common to reckon with contributions in the form of fixed annuities, including both interest and depreciation. The amount of the latter will be relatively very small during the first year but will increase year by year as the plant depreciates. It can thus appear as if the transition from one depreciation period to the next new one on the purchase of a new machine represented a positive profit which, however, subsequently became converted into a loss.

What all this is leading to, consequently, is that it is not possible simply to compare costs for an old and a new machine, limiting the comparison to conditions ruling solely at the time the replacement is contemplated. Instead, it is the average of the annual costs of the whole period in question which have to be compared with the average annual cost during a period somewhat longer and another period somewhat shorter. In other words it is a question of determining the length of the period of use T which will bring the average annual cost dependent on that period T, down to a minimum.

CALCULATION OF THE ECONOMIC PERIOD OF USE

The actual costs dependent on the length of period of use and with which we have to reckon, comprise mainly the following:

1. The average annual amount of depreciation $=\frac{K}{T}$.

2. The interest charges. These at first might be thought to be of considerable importance, but this is actually not the case. Assuming a constant annual rate of depreciation, the average annual interest charges will be $\frac{p}{100}\cdot\frac{K}{2}$ and are thus independent of T. As will be shown later, certain theoretical considerations postulate the abandonment of a constant rate of depreciation, which means that the average interest must be calculated on an amount somewhat less than $\frac{1}{2}K$. As this reduction is, however, only to a small extent dependent on the length of the period

of use, the interest will, for the time being, be garded as independent of T.

3. The annual costs of repairs and maintenance can conveniently be expressed in the form $c+bt$, where c and b are constants.

The variable component bt has an average value for the whole depreciation period of $\frac{1}{2}bT$. The average annual figure for the total maintenance cost is thus $\frac{1}{2}bT+c$.

4. The running expenses incurred in maintaining a certain production from a given machine, can be denoted by x. Limiting consideration to only a restricted period in the future we can state that

$$x=a-rt \qquad (1)$$

where a is the annual running expenses at the value $t=0$ and r the average reduction per annum which the employment of new and improved types of machine can effect. (Apart from irregularities, and considering a sufficiently lengthy period of time, the curve will presumably be asymptotic with the horizontal axis; but for a limited period it can always be considered simply as a straight line coinciding with the tangent.) As long as the machine is in use the annual running expenses will be constant and, in respect of the first depreciation period, will

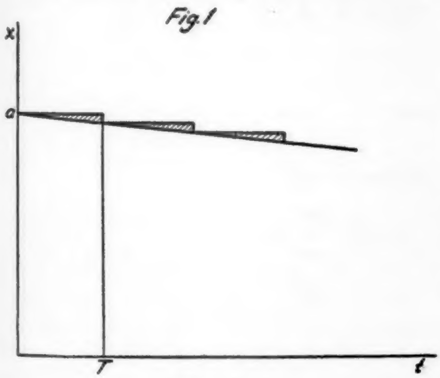

FIG. 1

be equal to a. The linear function x representing the steadily falling cost basis is not a function of T and need not, therefore, be considered in our calculations. The additional cost, on the other hand, dependent on our not being able each year to purchase the latest most efficient machine, is naturally dependent on the length of the depreciation period, i.e. is a function of T. Looking at Fig. 1, equation (1) enables us to arrive at an expression for the average annual value Δx (throughout the period T) of the additional cost:

$$T\cdot\Delta x=\tfrac{1}{2}T[a-(a-rT)]$$
$$=\tfrac{1}{2}T\cdot rT$$

or

$$\Delta x=\tfrac{1}{2}rT. \qquad (2)$$

That portion of the cost a which must be included is thus the amount Δx.

We arrive, therefore, at the following expression for the average value of the total costs dependent upon the length T of the service period:

$$M=\frac{K}{T}+\frac{1}{2}\,rT+\frac{1}{2}\,bT+c. \qquad (3)$$

To find the value of T which will make M a minimum we find that when

$$\frac{dM}{dT}=-\frac{K}{T^2}+\frac{1}{2}\,r+\frac{1}{2}\,b=0$$

$$\therefore\ T=\sqrt{\frac{2K}{r+b}}. \qquad (4)$$

Let us test equation (4) by a simple numerical example: let $K=100$, $b=0.4$ and $r=0.6$. This means that after a period of 10 years the maintenance costs amounted to 4% of the purchase price, and that the saving in the annual running expenses with a new machine amounts to 6% of the purchase price. If we assume that the latter was three times the annual running expenses, this again means that the saving in annual running expenses, relative to the annual running expenses themselves, is about 18% after the period of 10 years. Both these assumptions should be very reasonable.

It is natural enough that $(b+r)$ can only be determined very approximately. What it may actually have been on a group of machines for, say the last ten years, can, however, be more or less accurately fixed from statistical records. Should there be no spe-

cial reason to anticipate a change in the conditions it is perfectly reasonable to assume (as in all other cases of a like nature) that $(b+r)$ will in all probability maintain this value for the next few years to come.

In any case, an estimate based on such information will always be of more value than the pure guess-work which is all there is to fall back on otherwise.

One point which deserves mention as being of some weight is that repair costs do not always increase as a straight linear function: very often they remain practically constant over a period of years and then suddenly rise by a considerable amount. When this happens it is an indication, generally, of neglect in some form. If maintenance is scamped, the natural result will be that some day the machine suddenly breaks down, revealing all sorts of defects which have been allowed to develop unnoticed. Careful maintenance, however, should rather tend to result in maintenance costs which show a slow but steady increase as time goes on. Making calculation on the numerical example given above but taking the annual maintenance costs as increasing as the cube of the time and fixing the coefficient of t^3 so that the final annual maintenance costs are the same at the end of the depreciation period as when the increase was taken as linear (i.e. assuming the same terminal value but a slow increase during the first years, concluded by a rapid rise towards the end of the final year), it is found that the optimum economic period of service is decreased by only .8 year—an almost negligible amount.

We then find that $(b+r)=1$ and $T=14$ years.

ALLOCATION OF DEPRECIATION

Having arrived at a means of calculating the most advantageous length for the depreciation period (i.e. the optimum service period) let us now examine the allocation of the correct amount of depreciation to each year of that period. All costs which vary from year to year will have to be taken into account: these are the depreciation itself, interest charges and the variable part of the maintenance expenses. Calling the unwritten off part of the capital y, the sum of the variable annual costs will then be:

$$-\frac{dy}{dt}+\frac{p}{100}y+bt.$$

These costs have now to be apportioned by choosing a method of depreciation which will make the depreciating plant competitive to an equal degree each year of the period with a new plant with the latest machines on the market. The costs have, therefore, to be reduced annually by an amount equal to r (see equation 1). We thus obtain the equation:

$$\frac{d}{dt}\left(-\frac{dy}{dt}+\frac{p}{100}y+bt\right)=-r$$

or

$$\frac{d^2y}{dt^2}-\frac{p}{100}\frac{dy}{dt}=b+r. \tag{5}$$

Solving this equation gives the result:

$$y=A+Be^{(p/100)t}-\frac{100}{p}(b+r)t. \tag{6}$$

When $t=0$, $y=K$
and when $t=T$, $y=0$;
and so $A=K-B$

and

$$B=\frac{\frac{100}{p}(b+r)T-K}{e^{(p/100)T}-1} \tag{8}$$

whence we get

$$y=K-\frac{100}{p}(b+r)t+\frac{\frac{100}{p}(b+r)T-K}{e^{(p/100)T}-1}\left(e^{(p/100)t}-1\right). \tag{9}$$

What we are particularly interested in is the annual depreciation, $-\frac{dy}{dt}$, which is derived from equation (9):

$$-\frac{dy}{dt}=+\frac{100}{p}(b+r)$$

$$-\frac{p}{100}\,\frac{\frac{100}{p}(b+r)T-K}{e^{(p/100)T}-1}\,e^{(p/100)t} \qquad (10)$$

from which it is found that $\frac{dy}{dt}$ will be constant, i.e. the annual amounts of depreciation will be equal if:

$$\frac{100}{p}(b+r)T-K=0$$

i.e. if
$$\frac{p}{100}=\frac{(b+r)T}{K}. \qquad (11)$$

Assuming the same values for b and r as in the example above, equation (11) gives us a constant depreciation at an interest rate of 14%. For an interest rate of 5%, equation (10) gives us an annual depreciation of 11% when $t=0$, and 2% when $t=14$, the average value being $\frac{100}{14}$, or approximately 7%.

In cases where a long economically productive lifetime can be reckoned with, say 40 years,—which corresponds to a value (from equation 4) of $\frac{1}{8}$ for $(b+r)$—equation (11) gives us a constant depreciation at a 5% interest rate.

THE ECONOMIC LIFETIME TAKING INTEREST COSTS INTO ACCOUNT

As equation (9) gives us the capital value not yet written off at any given time, we are then in a position to calculate T, *assuming in every case that depreciation is calculated in accordance with equation* (10). The average value of y and consequently the average annual interest charge, will thus be dependent upon T, contrary to our first premise.

The average capital value over the period in question is

$$\frac{1}{T}\cdot\int_0^T y\,dt$$

and the annual average interest cost

$$\frac{p}{100}\cdot\frac{1}{T}\int_0^T y\,dt.$$

Putting this in explicit form by the aid of equation (9) and adding it to the right-hand side of equation (3) gives us a somewhat more complex expression for M:—

$$M=\frac{K}{T}+\frac{1}{2}rT+\frac{1}{2}bT+c+\frac{p}{100}K$$
$$-\frac{1}{2}(b+r)T+\frac{100}{p}(b+r)-\frac{K}{T}$$
$$-\frac{p}{100}\left[\frac{100}{p}(b+r)T-K\right]\cdot\frac{1}{e^{(p/100)T}-1}$$

or
$$M=c+\frac{p}{100}K+\frac{100}{p}(b+r)$$
$$-\frac{p}{100}\left[\frac{100}{p}(b+r)T-K\right]\cdot\frac{1}{e^{(p/100)T}-1}. \qquad (12)$$

Obtaining the expression for the differential coefficient $\frac{dM}{dT}$ and making it equal to 0 gives us, in reduced form, the equation:

$$\left[\frac{p}{100}K+\frac{100}{p}(b+r)-(b+r)T\right]e^{(p/100)T}$$
$$=\frac{100}{p}(b+r). \qquad (13)$$

Solving for T in this equation gives us $T=16$ years instead of the value 14.1 years obtainable by the use of equation (4).

It can easily be shown that equation (13) is identical with (10) in the case where $t=T$ and $\frac{dy}{dt}=0$. This means that the annual depreciation calculated from equation (10) becomes nil just at the end of a period T calculated from equation (13). Putting $T=16$ in equation (10) gives the result that when $t=0$, the annual depreciation is 11%, but when $t=16$, it is 0%; and the average

value is $\frac{100}{16}=6.2\%$. Thus if equation (13) is used to determine T, a constant rate of depreciation is not theoretically justifiable for any rate of interest.

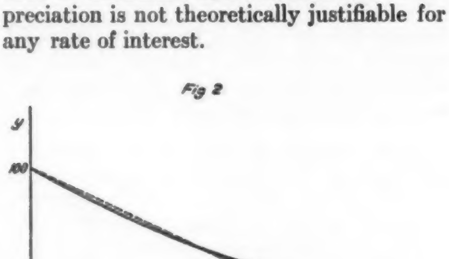

FIG. 2

In Fig. 2 is shown the value of y (i.e. the unwritten-off portion of capital) plotted against time, under the original assumption that $K=100$ and $b+r=1$ and that the period of use T [in accordance with equation (13)] is 16.

The lower curve in Fig. 3 represents a graphical solution of equation (13) and thus gives the relationship between the optimum service period T and the expression $\frac{(b+r)}{K}$.

In each case (Figs. 2 and 3) an interest rate of 5% has been assumed.

Remembering the high degree of uncertainty with which it is possible to assign values to r and b, the discrepancy between the results given by equations (13) and (4) respectively is really very slight. Equation (4) is consequently perfectly suitable in many cases, and in any event can always be employed when it is found preferable simply to use a constant annual depreciation over the whole period of service, with interest charges thus completely independent of T.

For longer periods of economic service, say of the order of 40 years, the difference between equations (4) and (13) becomes more pronounced; and in fact if it were feasible to make accurate calculations planning so far ahead, the use solely of equation (13) for the determination of T, in conjunction with equation (10) for determining the annual depreciation, would then be indicated. It is, in any case, of interest to note that lower annual costs, *right from the beginning* and over the *whole* of the service period, will always result from basing calculations on a somewhat longer period and a depreciation rate calculated by the use of equation (10) (which gives a relatively heavier rate of annual depreciation during the earlier part of the service period), in preference to using a shorter period in accordance with equation (4), coupled with an eventually constant annual rate of depreciation.

PRACTICAL APPLICATIONS

In order to anticipate possible criticism it should be made quite clear at this stage that the object is working out the foregoing analysis has not been merely to deduce formulae by the aid of which accurate calcula-

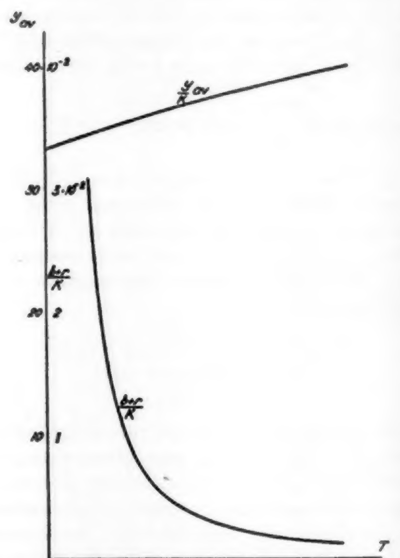

FIG. 3

tions can be made, for practical purposes, of the best periods and rates of depreciation. The intention is to have the position clearly analysed, and reduced to figures where ne-

cessary, in order that all the operative factors of practical importance can be seen against their true background. The author has found that when it comes to practical questions of costs and accounting, it is of the greatest importance to have the main principles perfectly clear. Neglecting this, it is remarkably easy to become entangled in a mass of difficulties. If the correct principles are, however, kept clearly in sight the whole time, it is relatively simple to arrive at suitable approximations and simplifications in their practical application, without the risk of wandering off the right lines.

The most convenient, and at the same time most theoretically correct method in the present case ought to be to calculate T from equation (13), and when it comes to the apportionment of the annual depreciation, to employ a simplified method approximating equations (9) and (10).

The upper curve in Fig. 3 represents the relative annual average of the unwritten-off capital throughout the service period, based always on the assumption that the latter is the estimated optimum. Thus in calculating $\frac{y_{av.}}{K}$ the values of $\left(\frac{b+r}{K}\right)$ and of T, respectively, are used which correspond with each other in accordance with the lower curve in Fig. 3. If written off at a constant rate throughout the whole service period, the average annual value of the plant will clearly be 50%; but this value drops to 33.3% in the case of very short service periods, i.e. to 67% or ⅔ of the value if written off at a constant rate throughout the period.

Again, a long service period of 40 years gives a value for $\frac{y_{av.}}{K}$ of 38%. A convenient approximation is to work with a constant annual depreciation rate so calculated that the plant is fully written off after from 67% of the calculated service period, when the latter is very short, up to 76% when it is of the order of 40 years—in which case the average annual interest charges will be the same as if depreciation had been arranged exactly in accordance with equation (10). However, the difficulty of making definite plans for the more remote future and the necessity of allowing a greater margin of safety the longer the service period is foreseen, make it suitable to reckon as a general rule with fully writing off the plant after ⅔ of the calculated service period. The dotted curve in Fig. 2 is plotted on this basis.

COMPARISON BETWEEN DIFFERENT METHODS OF CALCULATING DEPRECIATION

It is of interest to compare the average annual costs during the service period, calculated by the method we have just been examining, with the corresponding costs calculated instead in accordance with alternatively "straight-line" (constant) depreciation over the whole period, and depreciation based on the constant annuity method. Comparing the increase in total costs given by the latter two methods with the annual interest charges given by the former, it will be found that on the basis of straight-line depreciation over the whole period, the increased annual charge will amount to 37% of the interest charge, and on the basis of fixed annuity contributions to 57%.[3] In all three cases the optimum length of service period is assumed. The use, therefore, of any of the commonly recommended methods of estimating depreciation leads to a considerable increase in the costs, quite apart from their being unsound in the principle on which they allocate the depreciation rates to the respective years of the service period.

CALCULATION OF REPLACEMENT DATES

Let us now consider a concrete case in which we are in the position where we have to decide whether it would be economical to replace a given large machine by a new one. It has already been pointed out at the beginning of this article that it is not sufficient simply to compare the capital outlay involved by the purchase and use of the new machine during its first year of service, with the savings it makes possible in running and

[3] Employing the same numerical values as in the previous example above, where $b+r=1$.

maintenance costs. This assertion requires modification, however, if we calculate the first year's depreciation in accordance with the principles outlined above, i.e. from equation (10).

In laying down the method by which depreciation was to be apportioned over the various years of service, it has been assumed that all years of the period are economically comparable. For example, if we have had our machine for five years, the total production costs must be the same as for a newly bought machine. The depreciation is then so adjusted that the reduction in the total annual costs for the old machine is equivalent to the drop during the same period in the running expenses of a new modern machine as compared with the five-year-old one.

With identical cost conditions for the different years of the service period it will be obvious that a comparison between the costs for an old and new machine even at a certain moment will be decisive for the whole period; and as a check on this it can thus be stated that at the termination of a period of service calculated in accordance with equation (13), the fresh costs entailed by the new machine—consisting of interest on the whole capital K and depreciation in accordance with equation (10) (i.e. the value of $-\frac{dy}{dt}$ when $t=0$) will be exactly met by the saving in maintenance and running expenses.

Take it that we have estimated the useful life of our machine at 15 years and now want, after ten years use, to ascertain whether it may not already be due for replacement. We first have to estimate the saving we could effect at this point in its life by reduced maintenance and running costs. Dividing this sum by 10 gives us just our $(b+r)$. We must then find the corresponding value of T either direct from equation (13) or its graphical solution as given by the curve in Fig. 3. If it is exactly ten years, then the machine could be economically replaced and our originally estimated 15 year's service period would have been wide of the mark. If it is more than ten years, then the time is still not ripe for economic replacement.

There is no doubt this is the simplest way of checking whether a given machine should be replaced by a new one; but for those who do not fully appreciate such purely mathematical treatment it might appear to be a trifle artificial. An alternative method is, therefore, suggested as follows.

Assume again that after ten years we want to find out if the machine should be replaced. Making $T=10$ we find from equation (13) (or from the curve in Fig. 3 that the corresponding value of $\frac{(b+r)}{K}$ is $2.3\cdot 10^{-2}$. Using these values of T and $\frac{(b+r)}{K}$ we can then calculate from equation (10) the value of $\frac{dy}{dt}$ for $t=0$, or, in other words, the amount of annual depreciation at the beginning of the period of service of a hypothetical new machine. It is assumed, further, that the latter period is also to be ten years. We now make a comparison to see whether this annual depreciation, plus the interest on the whole purchase price K, will be balanced by the saving we just calculated would be possible in the annual maintenance and running costs. If this is the case, the machine is ready for replacement but if not, replacement should be postponed. In this example K, of course, refers to the purchase price of the new machine and not the purchase price of our old machine whose replacement we are considering (assuming these prices do actually differ somewhat).[4]

It is instructive to see the amount of error introduced, if, instead of fixing the first year's annual depreciation by the method given above, depreciation is calculated on the basis of straight-line depreciation over the whole period, or alternatively on the

[4] It may be indicated that the instalment of a new machine should be postponed sometime beyond the optimum period in cases where the capital at our disposal might give a better return by applying it at some other point in the undertaking.

annuity principle throughout. Quoting again the example where $b+r=1$, the correct annual depreciation at the start of the period was 11% of the purchase price. With an optimum service period and equal depreciation throughout it, the figure becomes 7% of the purchase price, and alternatively, on the basis of fixed annuity contributions, it is not more than 5%. It is thus seen that the error involved by the latter two methods in comparing the extra cost with the saving only just at the time when the new machine is purchased, is actually quite large.

SUMMARY

The practical conclusions to be arrived at from the foregoing analysis can be briefly summarized as follows.

A method is given of calculating the most economically advantageous period of use for a machine installation, and in particular of ascertaining on correct theoretical lines when a given machine will be due for replacement—the latter by stating the correct depreciation value on which to base a comparison of the increased capital costs from a new machine with the simultaneous saving in maintenance and running costs.

It is also shown how depreciation should be theoretically allocated to the different years of the service period; and the close approximation in replacing the theoretically correct procedure by calculating the constant annual depreciation in such a way that depreciation is complete after ⅔ of the estimated optimum service period.

ACCOUNTING FOR STOCK DIVIDENDS PAID

Harry D. Kerrigan

The preceding three articles[1] revealed that legal reasoning in relation to stock dividends is drawn in part from their known effects and implications in business practice. These considerations constitute the central subject-matter of the present study and will now be given a more detailed analysis. The plan is, first, to examine the subject from the standpoint of fundamental principles, and second, to use the principles as the basis for a rational theory of stock dividends. The present article deals with the payment of stock dividends; a subsequent article will be concerned with the receipt of stock dividends.

FACTORS ESSENTIAL TO PAYMENT OF STOCK DIVIDENDS

Without entering into the question of whether or not the policy of paying stock dividends is a proper expedient as a matter of finance,[2] it seems desirable to inquire what conditions should exist before the policy of paying such dividends may be carried out. Concern is had here more with the factors which enable payment than those which motivate payment. The first requisite is that the company must be enjoying profitable operations. The trend of earnings must be up. In this respect stock dividends are like other dividends in that they are reflective of the existing prosperity of the distributor.

Secondily, cash dividends paid must be well under annual earnings, thereby permitting accumulation of profits in the business. In a growing business, partial retention of earnings is generally forced upon the company. This is because expansion creates need for additional funds and earnings provide a readily available source of such funds. Moreover, partial retention of earnings is a necessary accompaniment to the introduction of senior capital under a system of conservative financing. The fact of growth is thus seen to be instrumental as a cause of retained

[1] See Accounting Review (1936), Vol. XI, p. 373; Accounting Review (1937), Vol. XII pp. 93 and 238. Certain suggestions, made in the last article of this series, regarding proper source of stock dividends declaration and minimum standards as to amount of capitalization on distributor's books are further developed in the present paper.

[2] Stock dividends as a financial expedient is reserved for treatment in a later part of the present study.

Effect of a 5% Cash Dividend on Financial Condition of Distributor

Particulars	Before Dividend	Payment		After Dividend
		Debit	Credit	
Cash	$ 400,000	—	$150,000	$ 250,000
Other current assets—net	1,000,000	—	—	1,000,000
Plant & equipment—net	5,000,000	—	—	5,000,000
Total assets	$6,400,000			$6,250,000
Current liabilities	500,000	—	—	500,000
Long term liabilities	2,000,000	—	—	2,000,000
Capital stock—par $100 per share	3,000,000	—	—	3,000,000
Earned surplus	900,000	$150,000	—	750,000
Total liabilities and net worth	$6,400,000	$150,000	$150,000	$6,250,000

FIG. 1

earnings in that a basic need for funds is created. A third condition essential to the payment of stock dividends is that the earned surplus be unrestricted by legal or contractual requirements.

EFFECT ON DISTRIBUTOR

A comparison of the effects of cash and stock dividends is presented in figures 1, 2 and 3. The comparative method is selected because it is thought that the differences between the two types of dividends in their effect upon the distributing company are an added source of explanation of stock dividends. The illustrations involve a 5 per cent dividend. If the dividend was paid in cash, assets in the form of cash would diminish. There would also be a corresponding amount of decrease in net worth as represented by earned surplus. The medium of payment is cash; the source is earned surplus. If the dividend was paid in own capital stock, the transaction is entirely confined to a redistribution of values between two categories of net worth. Earned surplus in the amount of the dividend would diminish. This would be accompanied by a corresponding increase in capital stock. In other words, a stock dividend produces a change in the content of net worth by redistributing values within it, leaving the total net worth the same.

Two collateral effects may also be noted. The number of shares of capital stock is increased by the quotient of the amount of the dividend divided by the par value per share.[3] In the illustration this increase

[3] Par amount is used, instead of some other amount

Effect of a 5% Stock Dividend on Financial Condition of Distributor

Particulars	Before Dividend	Payment		After Dividend
		Debit	Credit	
Cash	$ 400,000	—	—	$ 400,000
Other current assets—net	1,000,000	—	—	1,000,000
Plant and equipment—net	5,000,000	—	—	5,000,000
Total assets	$6,400,000			$6,400,000
Current Liabilities	$ 500,000	—	—	$ 500,000
Long term liabilities	2,000,000	—	—	2,000,000
Capital stock-par $100 per share	3,000,000	—	$150,000	3,150,000
Earned Surplus	900,000	$150,000	—	750,000
	$6,400,000	$150,000	$150,000	$6,400,000

FIG. 2

Cash and Stock Dividends
Comparison of Effects on Financial Conditions of Distributor

	Before	*After Cash Dividend*	*After Stock Dividend*
(1) Assets—total	$6,400,000	$6,250,000	$6,400,000
(2) Liabilities—total	2,500,000	2,500,000	2,500,000
(3) Net worth—total	3,900,000	3,750,000	3,900,000
Net worth represented by—			
Capital stock	$3,000,000	$3,000,000	$3,150,000
Earned surplus	900,000	750,000	750,000
	$3,900,000	$3,750,000	$3,900,000
(4) No. of shares outstanding	30,000	30,000	31,500
(5) Book value per share	$130	$125	$123.81

Fig. 3

amounts to 1500 shares. Since the total value of net worth as shown by the balance sheet is the same before and after the stock dividend, the increase in outstanding shares results in a dilution of the book value per share as it existed before the dividend. The dilution is $6.19 per share in the example used, the per-share book value declining from $130 to $123.81. Note that a dilution of book value per share occurs also when the dividend is paid in cash. The dilution amounts to $5 per share in the example.[4] Another collateral effect is to remove the possibility of future cash dividends from the portion of earned surplus transferred to capital stock by means of the stock dividend.

SOURCE OF THE DIVIDEND: EARNED SURPLUS

There is no basis for the view that any surplus item, merely because it is a surplus, is suitable as a source from which to declare stock dividends. Nor is there sound reason for using legality as a test of available source, except, of course, negatively as a means by which to avoid illegal dividends. Just as surplus accounts may appear on a company's books which for valid business reasons are not recognized as earnings, so surplus accounts may exist which for equally valid business reasons are not recognized as proper sources from which to declare dividends. Since the reasons for this differentiation have already been stated at length in a previous article, they need not be repeated here. We may therefore state the thesis, without restating the detail argument, that earnings accumulated as earned surplus should alone serve as the dividend base.[5] Earned surplus

per share, simply as an example. The question of evaluation of dividend stock on issuer's books is discussed at length below.

[4] Discrepancy in the per-share decrease of book value resulting from the payment of the two types of dividends arises because the two dividends are really not equivalents. In the case of the stock dividend, the same book value is divided by 31,500, the sum of old and new shares; in the case of the cash dividend, the book value after the dividend is divided by 30,000 shares.

[5] Looseness in state corporation laws, combined with a desire to maintain stocks in favorable speculative position, led corporations during the financial era just prior to 1929 to the practice of declaring stock dividends from surplus other than earned surplus. Accountants generally condoned the practice, probably on the ground that the nature of the transaction would be clear to everyone concerned and that each one would know in what manner his interest was affected, if at all, by the action of the corporation. That this assumption was unjustified as far as the investing public generally is concerned is shown by the following observation of the Industrial Securities Committee of the Investment Bankers Association of America: ". . . the attitude of most stockholders toward regular stock dividends . . . [is that] . . . after the dividend they have more than they had before." The committee then went on to say that "stock dividends must be justified by earnings," and that "earnings . . . [alone] . . . justify such dividends." *Proc. Investment Bankers Assoc. of America* (1929), pp. 43, 45.

A similar conclusion was reached after a special study of the problem by the New York Stock Exchange. Positive action was taken by the Exchange upon the completion of the study to enforce the principle upon listed companies. The following excerpts from two announcements of the Exchange explain the position taken: ". . . a true stock dividend represents the capitalization . . . of past or current earnings." (Announcement dated September 11, 1929). "The fact that state

may clearly and amply exist, of course, without being available for dividends in cash or stock because of voluntary financial policy of the company or because of restrictions imposed by statute or contractual commitments.

AMOUNT OF EARNED SURPLUS CAPITALIZED

The amount per share transferred from earned surplus has been in the past generally deemed proper if such amount was equal to the par value per share issued as a stock dividend. This rule originated many years ago before the development of the small periodic stock dividend and of stock with nominal par value and no-par stock accompanied by large paid-in surpluses. The growth of the corporate practices mentioned has introduced new problems which have defied solution along the lines of old principles established under conditions of a different financial era.[6] Accounting practice has therefore had to adopt itself as soundly as possible to the new facts and practices in corporate finance. The adaptation to the new situation has not, however, been uniformly carried out, with the result that different methods are found in practice.[7] The more common of these methods are discussed below.

(*1*) *Where Par Value Stock is Issued*

The rule stated in the preceding paragraph is still generally regarded as valid, in the case of par value preferred stock issued as a stock dividend. The reason offered for this basis of evaluation is that preferred stock is to a degree a sort of liability to be shown, like other liabilities, at its face value. A necessary proviso would seem to be that if redemption price is in excess of par, the former basis shall be used.[8] The preferred stock issued as a stock dividend may carry conversion rights at a value in excess of par, but this would not seem to matter here. The same, however, cannot be said of involuntary redemption or liquidation value, if

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laws may permit stock dividends to be paid . . . [from surplus other than earned surplus] . . . has no bearing on the correct accounting procedure to be followed." (Announcement dated April 30, 1930). Thus since 1929 the regulations of the Exchange have required listed companies which declare stock dividends (i.e., "small, periodic stock dividends") to charge such dividends against earned surplus.

[6] As seen in the last article of this series, the statutory requirements, even under the so-called modern state corporation laws, cover the point in the barest manner. Proceeding from the concept of legal or stated capital, these laws have lost much of their regulative features in the face of the new corporate practices mentioned in the text. The freedom generally granted under the state laws to treat what is essentially paid-in capital as surplus subject to charges for dividends and operating losses has threatened to obliterate the distinction between capital and income. The inadequate standards set up under existing statutes are therefore additional reasons for viewing the problem from the standpoint of sound accounting practice.

[7] A variety of methods have been used by corporations, in accounting for stock dividends paid. The results from the 1929–30 study of the subject by the New Stock Exchange showed nine methods commonly in use:

1. The issuance of additional stock described as a stock dividend without the transfer to capital of any sum whatsoever, either from capital [paid-in] surplus, from earnings, or from earned surplus;
2. The transfer to capital account from capital surplus of a nominal sum per share issued;
3. The transfer to capital account from capital surplus of an amount per share issued equal to the theretofore stated value or par value of the stock, per share;
4. The transfer to capital account from earnings or earned surplus of a nominal amount per share issued;
5. The transfer to capital account from earnings or earned surplus of an amount per share issued equal to theretofore stated value or par value of the stock per share;
6. The transfer to capital account and/or capital surplus from earnings or earned surplus of an amount per share issued equal to the theretofore stated value or par value of the stock per share, plus the theretofore capital surplus per share;
7. Particularly with companies having large uncapitalized tangible or intangible assets, the transfer to capital account and/or capital surplus from earnings or earned surplus of an amount per share issued greater than the sum of the theretofore capital per share plus capital surplus per share and less than the market value per share;
8. The transfer to capital account and/or capital surplus from earnings or earned surplus of the theretofore entire book value per share, including earned surplus; (note—if earned surplus were 100 percent of capital, this method would exhaust earned surplus upon payment of a 50 percent stock dividend);
9. The transfer to capital account and/or capital surplus from earnings or earned surplus of an amount per share issued equal to the market value of the stock upon some convenient nearby date.

[8] This statement is valid only in cases where redemption price is something more than a gesture, i.e., where it may reasonably be predicted that the company is capable, as evidenced by its current balance sheet, to redeem the preferred stock at the price stated. Otherwise, the redemption feature is merely an adornment attached to the stock and may be disregarded. The proviso stated in the text is, however, a practical necessity in cases where the preferred stock contract calls for compulsory redemption by the company.

in excess of par value. Conversion value refers to an eventuality dependent upon the exercise of option of stockholders, while redemption or liquidation value represent a definite contract price which fixes the amount of participation in corporate assets at dissolution. The amount transferred from earned surplus on the occasion of payment of preferred stock with par value should, under the general basis considered, therefore be par or redemption value, whichever is higher.[9]

If the dividend stock is represented by par value common stock and there is no paid-in surplus from the sale of the original stock, the rule of par value first stated above has been generally regarded also to hold in this case. Is there a rational explanation for applying this rule for par value common stock of the type described? If the stock distributed as a dividend is viewed as an alternative to sale upon the market, the amount per share represented by par value that is transferred from earned surplus is clearly arbitrary. A business which is successful and seasoned and has not paid out all its earnings in cash can very probably sell additional common stock at an issue price in excess of par.

Four reasons are advanced for the adoption of the par value standard by its advocates. (1) The essential effect of a stock dividend is to impound a portion of earned surplus so that it may become a part of the permanent capital of the business. Viewed thus, the *amount* transferred from earned surplus appears as the primary factor, the number of shares to be issued being simply the quotient of this amount divided by the known capital unit value (par) per share. (2) Issued shares should be fully-paid shares —a result sufficiently obtained by transferring from earned surplus the par value per share of dividend stock issued. (3) The capital unit value (par) per share is also the per share paid-in value and hence the effect after the stock dividend is to maintain a uniform paid-in value per share outstanding. (4) If the distribution is assumed to be to existing stockholders holding the same class of stock, there is no dilution of *total* book value of common stockholdings as it existed before the stock dividend.

(2) *Where Stock With Low Stated Value is Issued*

What is the proper amount per share that should be transferred from earned surplus when common stock with low par or stated value per share is distributed as stock dividends? Neither the authorities nor custom have as yet established a standard solution to this problem. A practice which has a considerable following may be briefly examined. This practice emphasizes paid-in capital per share and uses this basis to capitalize a sufficient amount of earned surplus. A characteristic of no-par common stock with low stated value and low-par common stock is that a substantial portion of the proceeds from the sale of both types of stock is booked as paid-in surplus. The paid-in capital per share of either type of stock is thus the sum of the per-share amount booked as capital stock and the per-share amount set up as paid-in surplus. An average amount per share of paid-in capital may have to be calculated if issue prices have varied on successive stock sales. The procedure under the practice considered is thus, first, to determine the amount of earned surplus to be capitalized as stated in the directors' resolution declaring the dividend, and, second, to divide this amount by the per-share paid-in capital, actual or average, to arrive at the number of shares to distribute. The reasoning back of this method is that paid-in surplus is as much a part of the stockholders' contribution as capital stock, and that the two categories must be considered together in evaluating a stock dividend, for the purpose of an appropriate charge per share to earned surplus.[10]

[9] Another reason for the suggested refinement is found in the fact that the computation of book value is usually made to reflect the premium, if any, at redemption or liquidation. It is realized that the refinement offered is generally not followed, par value preferred being generally booked at par, even though it is redeemable at an amount in excess of par.

[10] The New York Stock Exchange has adopted this method as a minimum standard for the charge to earned surplus for listed companies. The ruling is restricted to "periodic stock dividends" and is expressed as follows: "In the accounting for Stock Dividends . .

Only in this manner of issuing more stock, it is argued, is it possible to prevent dilution or impairment of the per share "capital value" existing before the dividend is made. In this respect the "capital value" basis has a close resemblance to that discussed in the preceding section.

An illustration of how the principle is applied follows. Assume a company which at December 31, 1937 showed on its books: (1) Common stock: authorized 50,000 shares, par value per share $10, outstanding 16,000 shares; (2) Paid-in surplus on common stock $20 per share; (3) Earned surplus $12.50 per share. It is decided to declare a dividend of 5% of common stock and paid-in surplus. The amount of the dividend is $24,000 (5% of $160,000 plus $320,000), and the number of dividend shares to be issued is 800. The journal entry to record the transaction is:[11]

Earned surplus....$24,000.00		
	Capital stock-common......	$ 8,000.00
	Paid-in surplus............	$16,000.00

Stock dividends paid in preferred stock with a stated value are generally capitalized on the basis of that value, which is practically a substitute for a par amount. Advocates of the paid-in capital basis, discussed above, would undoubtedly extend their principle to cover no-par preferred stock with or without stated value. The discussion already made as to redemption price of par-value preferred stock also applies to no-par preferred stock with or without stated value.

SMALL PERIODIC STOCK DIVIDENDS AND THE PROBLEM OF EARNED SURPLUS TO BE CAPITALIZED

The methods discussed above are logically applicable to stock dividends, large or small, occasional or regular. The practice of paying small, periodic stock dividends as a substitute in part or in whole for cash dividends has, however, led to the formulation of other principles to govern the charge to earned surplus. Two of the more important methods are discussed below.

(1) *Charge Earned Surplus with Per Share Book Value of Stock Existing at Beginning of Dividend Period*

One suggestion proceeds from the basic view that stock dividends of the type under consideration are declared from earnings accumulated over a specific fiscal period—usually the current one. Emphasis is on the time element, which is viewed as being just as essential in the case of regular stock dividends as it is in respect to regular cash divi-

[upon issuer's books] . . . whether for stock with par value or without par value, Capital and Capital Surplus should be regarded together as the consideration, other than earnings, represented by the stock. The sum per share of the two accounts is the minimum amount per share to be issued as a Stock Dividend, which should be charged against earnings or Earned Surplus. . . ." Announcement on Stock Dividends, dated April 30, 1930.

This action on the part of the Exchange no doubt arose from the many complaints addressed to it referring to the known practice of listed corporations with stock of nominal stated value or no par value in transferring such small amounts from earned surplus as to be meaningless and positively misleading, to inexpert investors. The excerpt given below, from an address by J. M. B. Hoxsey, illustrates how the stock dividend device was open to abuse in the absence of the regulatory measure adopted by the Exchange.

". . . . take the case of an actual company whose initial stock issue was sold for $100 a share in cash. One dollar per share was set up as Capital and $99 per share as Capital Surplus. Let us suppose that this company earned $10 per share in the first year . . . [which is] . . . 10% on the consideration received for the stock. Assume that this company wished to declare a 10% stock dividend . . . $1 per share issued, the amount of the stated Capital per share, is charged against earnings and credited to Capital. This would amount to a charge of 10 cents against earnings, for each share upon which such dividend is paid, leaving $9.90 in Earned Surplus out of each $10 originally earned. Thereafter, without any further earnings, if this method of accounting be correct, the corporation could go on for approximately 25 and one-quarter years, paying a 10% stock dividend each year and stating that such dividend was paid out of Earned Surplus. The result is, of course, absurd." "Accounting For Investors," *J. Accountancy* (1930), Vol. 50, p. 267.

[11] In the example given, the stock dividend paid is described as "a dividend of 5% on capital stock and paid-in surplus." A practice frequently observed in dividend announcements is the description of a dividend paid in low-stated value stock on the same class of stock as a dividend of so much per cent on stock with comparatively small stated value per share. This practice needs only to be stated to be discredited. It is clearly erroneous, as the "per cent" involved is essentially meaningless. In the illustration given above, the dividend could be announced either as (1) "a dividend of 5% on capital stock and paid-in surplus" or (2) "a dividend of $1.50 per share." For stock of low-stated value or of no-par value, the dividend is best described by expressing it as a dividend of a certain dollar amount per share.

dends, or with respect to the general problem of income. In harmony with this view, it is advocated that the per share equity of the common stock outstanding in net worth after a stock dividend should be kept at least as great as the per share equity existing at the beginning of the dividend period. In operation, this means that the per share charge to earned surplus for dividend stock must be at least equal to the book value of the stock at the beginning of the dividend period. The principle is made applicable to shares with high as well as low nominal stated value.[12]

An illustration applying the foregoing principle follows. Assume a company which at January 1, 1937 showed on its books: (1) Common stock: authorized 50,000 shares, par value per share \$10, outstanding 16,000 shares; (2) Paid-in surplus on common stock \$20 per share; (3) Earned surplus \$11 per share. Assume that 1937 earnings on the common stock amount to \$1.50 per share. Under the principle considered, the maximum number of dividend shares possible issue is 585.36. The amount of the dividend is \$17,560.80 (585.36×\$41.00). The journal entry to record the transaction is:

Earned surplus \$17,560.80
  Capital stock—common . . . . \$ 5,853.60
  Paid-in surplus \$11,707.20

After the dividend, the common shares outstanding total \$16,585.36 with a per share book value of \$41 and an aggregate book value of \$680,000. The per share book value of \$41.00 is exactly equal to the per share book value existing at January 1, 1937. In other words, after the stock dividend, the per share book value of the common stock as of the beginning of the accounting period is held intact and unimpaired. The reason is that only that number of dividend shares are issued as will leave in earned surplus the per share earned surplus existing at the beginning of the accounting period, and in addition, enough to provide a similar amount of per share earned surplus on the shares issued as dividends. In the example, after the payment of the stock dividend there is a per share equity in earned surplus of \$11 on all shares outstanding—on both the dividend shares and the shares on which the dividend was made. It will be noticed that as a result of this fact, not all of the 1937 earnings are capitalized. Because the amount of earned surplus that is capitalized represents the 1937 increment in that account, the stock dividend distributed is said to be made from 1937 earnings of the company.[13]

(2) *Charge Earned Surplus with Market Value of Dividend Stock*

Another proposal is to charge earned surplus with the fair market value of the stock issued as dividends. By fair market value is meant an average of actual market quotations over the dividend period just ending. Strictly speaking, the amount so calculated should be adjusted for the increased shares resulting from the dividend.[14]

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[12] Advocates of this principle include J. M. B. Hoxsey, executive assistant, Committee on Stock List, New York Stock Exchange, and H. C. Freeman, Vice-President, The North American Company, New York. Illustrative of the views of both men is the following statement of Hoxsey: "The test of the true currently earned stock dividend is that after its payment the total book value per share shall be (with due adjustment for intervening financing) as great or greater than the total book value prior to the accumulation of the earnings upon which the stock dividend is based—in other words, ordinarily that the book value per share after this Stock Dividend shall be as great or greater than after the last Stock Dividend." "Accounting for Investors," *J. Accountancy* (1930), Vol. 50, p. 273. It will be noticed that Hoxsey's rule is towards a greater degree of conservatism as compared to the regulation of the Stock Exchange.

[13] The following formula is useful for determining the maximum number of shares which may be issued as stock dividends under the principles stated:

$$D=\frac{E}{C+S}$$

Where—
D=Maximum number of shares which may be issued as a stock dividend
E=Earnings for accounting period
C=Sum of per share capital stock and paid-in surplus at beginning of accounting period
S=Per share earned surplus at beginning of period

For the example given the computations are as follows:

$$D=\frac{E}{C+S}=\frac{24{,}000}{30-11}=\frac{24{,}000}{41}=585.36 \text{ shares}$$

[14] R. H. Montgomery, an advocate of the principle under consideration definitely states the necessity for the adjustment referred to. See *Auditing, Theory and Practice* (1934, fifth edition), p. 454.

Like the preceding principle, the effect of the present one is also definitely to limit the number of shares which may be issued as dividends. This is because the principle would operate to prevent stock dividends from exceeding in market value the amount of earned surplus capitalized by the distributor. In its application to small, periodic stock dividends, the principle would require use of two elements: (1) the per share fair market value of the stock and (2) amount of earnings for the current period. The quotient obtained from dividing (2) by (1) is the maximum number of shares distributable as dividends.[15] The reasoning in support of the market value basis is deferred to the section following.

CONCLUSION ON AMOUNT OF EARNED SURPLUS TO BE CAPITALIZED

The market value basis appears to be the soundest principle to follow in determining amount of earned surplus to be capitalized. The rule is a greatly needed restraint, especially on the practice of declaring periodic stock dividends. Without some such restraint regular stock dividend may easily deceive the average investor. The reasoning behind this belief may be briefly stated. It is not uncommon to find the market price of a stock far in excess of the book value as reported by the balance sheet of the company.[16] Whether or not the difference is due to "uncapitalized assets" by the company is difficult to tell, but the existence of the difference is an objective fact to be given sober consideration. Under these circumstances, it is easy for the uninitiated to confuse a comparatively high cash value of the current dividend payment in stock with the earnings of the distributor. A material discrepancy may exist between the amount at which the dividend is evaluated on the issuer's books, as evidenced by the transfer from earned surplus, and the market value of this dividend.[17] There is, accordingly, a beclouding of the true significance of a "currently earned" stock dividend and the opening of an avenue for manipulation. One likely result of the discrepancy referred to is an unwarranted inflation of market price. The setting for a vicious circle could not be more complete. The higher the quoted market price the greater would be the apparent value of the dividend stock, which in turn would seem to justify a still higher market price, and so the spiral would continue until halted by other factors at work. "Such a result," in the words of two well known writers, "is deceptive and supplies unwholesome impetus to riotous speculation as well as to thoughtless investment."[18] The unjustified enhancement in market price must necessarily be of temporary duration, with the consequence that the practice gives insiders and those well initiated in the ways of the stock market an unfair advantage over others. It may be readily conceded that, in theory the market value of the stock is chiefly reflective of its rate of earnings, present and prospective. Hence, in theory, a stock dividend appears to have no influence on aggregate market price. The day the stock on which the stock dividend is declared goes "ex dividend" would see an automatic downward adjustment of per share market price to allow for the increased shares. This, however, is the economics of the matter, viewed theoretically. In actual-

[15] This statement needs to be modified if it is desired to reflect in the calculated per share fair market value the theoretical reduction of price caused by the increased shares. (1) in the text, so adjusted, then becomes "the per share fair market value after the stock dividend." The value referred to may be computed by the formula given below.

$$P_1 = P - \frac{E}{N}$$

Where—

P_1 = Expected per share market value after the stock dividend

P = Per share market value before the stock dividend

E = Earnings for current period

N = Number of shares outstanding before stock dividend.

[16] No balance sheet that follows the accepted principles of accounting attempts to show present values of all assets which it possesses, tangible or intangible. In contrast to this is market value of the stock, which purports to show present values. Hence the cause for difference in the book value and market value of a given stock in many cases.

[17] To illustrate the situation referred to, there is presented below the dividend records of two companies which adopted the policy of paying regular stock dividends for the years stated.

[18] Graham, B., and Dodd, D. L., *Security Analysis* (1934), p. 345.

AMERICAN LIGHT AND TRACTION COMPANY[a]

RECORD OF STOCK DIVIDENDS PAID, 1909–1925
COMPARISON OF EARNINGS PER SHARE WITH STOCK DIVIDEND PAID PER SHARE ON THE BASIS OF (A) CHARGE TO EARNED SURPLUS AND (B) MARKET VALUE THEREOF

YEAR	EARNINGS PER SHARE[b]	MARKET VALUE RANGE OR[c] AVERAGE BID AND ASK		STOCK DIVIDENDS DECLARED[d] (Per cent of par value[e])	VALUE OF THE STOCK DIVIDEND		Ratio of Market Value of Stock Dividend to Evaluation Per Company's books
					Per Company's books[f]	To the Stockholder Average Market Value	
1925	$18.58	$288–$137	$212.50	1	$ 1.00	$ 2.13	$2.13
1924	11.80	149– 117	133.00	4	4.00	5.32	1.33
1923	9.97	140– 109	124.50	4	4.00	4.98	1.25
1922	10.86	165– 113	139.00	4	4.00	5.56	1.39
1921	9.39	102– 78	90.00	4	4.00	3.60	.90
1920	8.08	110– 92	101.00	8½	8.50	8.59	1.01
1919	13.13	278– 175	226.50	10	10.00	22.65	2.27
1918	13.92	193– 195	194.00	10	10.00	19.40	1.94
1917	20.25	318– 321	319.50	10	10.00	31.95	3.20
1916	25.66	381–	381.00	10	10.00	38.10	3.81
1915	24.62	321– 323	322.00	10	10.00	32.20	3.22
1914	22.32	340– 343	341.50	10	10.00	34.15	3.42
1913	25.08	360– 370	365.00	10	10.00	36.50	3.65
1912	26.05	345– 350	347.50	10	10.00	34.75	3.48
1911	27.80	295– 297	296.00	10	10.00	29.60	2.96
1910	27.64	278– 280	279.00	10	10.00	27.90	2.79
1909	24.24	227– 230	228.50	12½	12.50	28.56	2.29

[a] Original data from Poor's Manual and the Commercial and Financial Chronicle, Bank and Quotation Supplement.
[b] Based on consolidated earnings per annual report of Company, divided by the number of shares outstanding at year-end.
[c] 1919–25, inclusive, range of market price on the New York Curb, 1909–18, inclusive, bid and ask prices over-the-counter. In all cases, figures are given to the nearest dollar.
[d] 10%, July, 1909; 2½%, Nov. 1909; 2½% quarterly from 1910 through May, 1920; 1¾% semi-annually in 1920; 1% quarterly, 1921 through Feb., 1925. The stock has a per share par value of $100. Stock dividend policy was dropped after 1925.
[e] The figures of 10% as four times quarterly dividends of 2½% is not accurate. Actually, four quarterly stock dividends of 2½% result in a year's total of 10.3813% on stock held at beginning of year. Similarly, the other "Annual" percentages are inaccurate, strictly speaking, where they are the sum of semi-annual or quarterly per cents.
[f] Amount charged to earned surplus.

ity, the adjustment described may or may not take place; frequently it does not, however "irrational" the result may seem to be.[9]

A rule which would prevent the issuance of a "currently earned" stock dividend which in market value exceeds current earnings may seem no more reasonable or necessary than a rule which would prevent the payment of cash dividends in excess of current earnings. There is, however, a more or less practical limit on cash dividends which is nonexistent in the case of stock dividends. In the former case, the dividend cannot be made unless there is cash in excess of corporate needs. The utilization of cash and other assets in operations is a natural bar to their withdrawal from the business. Such control clearly is absent when dividends are paid in stock. It would be comparatively simple for a corporation that is earning, say, $5 per share per annum to issue stock dividends carrying a market value (cash value) of twice the per share earnings. The possible misconception arising from this discrepancy has already been noted.

A further ground on which to justify the market value basis is that the earned surplus capitalized when a stock dividend is paid constitutes the consideration price for the issued shares, which is a matter requiring reference to market value.

If the stock were sold the entire amount of the proceeds would be credited to capital stock or partly to capital stock and partly to paid-in surplus. A corporation cannot make profits, directly or indirectly, by issuing securities. If less than the amount which would be received if the stock were sold is

[10] "When the distribution represents . . . [a stock dividend] . . . from current earnings, the market very frequently is approximately the same after the dividend as before." R. H. Montgomery op. cit., page 453.

" . . . usually when a stock sells ex a regular stock dividend, it sells at a price about that before the dividend was declared. It sells at a higher price at least as often as a lower." Report of Industrial Securities Committee, Investment Bankers Association of America, *Proceedings* (1929), p. 44.

See also Graham and Dodd, *op. cit.*

The foregoing views rest on specific instances falling under the observation of the particular writers. The matter has also been statistically investigated. Two such studies have come to the attention of the writer. Both of them, after conceding the difficulty of segregating and measuring the variable under examination, conclude that no noticeable effect on market price–up or down–is discernible from the practice of paying regular stock dividends. See Livermore, S., "The Value of Stock Dividends," *Amer. Econ. Rev.* (1930), Vol. 20, p. 688; Siegel, S. N., "Stock Dividends," *Harvard Bus. Rev* (1932), Vol. 11, pp. 76, 87.

NORTH AMERICAN COMPANY[a]

RECORD OF STOCK DIVIDENDS PAID, 1923–1934
COMPARISON OF EARNINGS PER SHARE WITH STOCK DIVIDEND PAID PER SHARE ON THE BASIS (A) CHARGE TO EARNED SURPLUS AND (B) MARKET VALUE THEREOF

Year	Earnings per Share[b]	Market Value		Stock Dividends Declared (Per cent of par or stated value)	Value of the Stock Dividend		Ratio of Market Value of Stock Dividend to Evaluation Per Company's books
		Range	[c]Average		Per Company's books[f]	To the Stockholders (Average Market Value)	
1934	$1.04	$ 25–$10	$17.50	5%	$0.50	$ 0.88	1.76
1933	1.19	37– 12	24.50	8½	1.47[h]	2.85	1.94
1932	1.94	43– 14	28.50	10	.85	2.08	2.45
1931	3.29	90– 26	58.00	10	1.24[g]	5.80	4.68
1930	4.37	133– 57	95.00	10	1.00	9.50	9.50
1929	4.82	187– 67	127.00	10	1.00	12.70	12.70
1928	4.51	97– 56	76.50	10	1.00	7.65	7.65
1927	3.86	65– 46	58.50	10	1.00	5.55	5.55
1926	3.85	67– 42	54.50	10	1.00	5.45	5.45
1925	3.12	75– 41	58.00	10	1.00	5.80	5.80
1924	3.16	45– 22	33.50	10	1.00	3.35	3.35
1923	3.11	24– 18[d]	21.00	5	.50	1.05	2.10

[a] Original data from Standard Corporation Records.
[b] Based on consolidated earnings per annual report of Company, divided by number of shares outstanding at year-end.
[c] Prices given to the nearest even dollar.
[d] Figures shown refer to the $10. par value stock, the range for which was both higher and lower than that for the old $50. par value stock after adjusting the market price of the latter for the five-for-one split in 1923.
[e] 1923, one dividend at 2½% on the old $50. par value stock and one at 2½% on the new $10. par value stock after the former was exchanged for the latter at five new shares for one old; 1924–32, inclusive, quarterly at 2½%; 1933, one at 2½% and three at 3%; 1934, one at 2% and three at 1%. Stock dividend policy dropped after 1934. See footnote (e) page 377, for comment on accuracy of "annual" per cents used.
[f] Figures represent amounts charged to earned surplus.
[g] In 1931, $1.00 was credited to common stock for the total of 10% declared in stock dividends during the year. In addition to this amount, a total of 24 cents was credited to capital surplus for the last two quarterly dividends of 2½% each declared on each share.
[h] In 1932, $1.00 was credited to common stock and 46.8 cents was credited to capital surplus for the total 10% in stock dividends declared on each share.

charged against earned surplus on the issuance of dividend stock, it has the same effect as the transferring of an amount equal to the difference from paid-in capital to earned surplus. If a corporation considers a high market price a bar against issuance of stock dividends in accordance with that basis, the market price may be used to advantage by selling stock and paying, from part of the proceeds, a suitable amount of cash dividends. This procedure may be followed until the market price declines to a point where it is no longer disadvantageous to declare stock dividends.

Although the market value basis has been discussed in connection with so-called periodic stock dividends, there appears nothing to prevent it from being wholly and unqualifiedly applied to stock dividends irrespective of size or frequency.[20]

[20] The accounting profession through its national organization, the American Institute of Accountants, has not as yet gone on record in approval of any specific basis of per share capitalization upon issuance of stock dividends. Presumably, any basis used by the client would be acceptable to professional accountants provided it was legally permissible, or, for listed companies, permissible under stock exchange regulations. From *Examination of Financial Statements* (1936), p. 29, published by American Institute of Accountants: "If stock dividends have been distributed, ascertain that the treatment is in accordance with the minutes. Adequate disclosure should be made."

SPECIAL PROBLEMS

A number of special problems exist relating to stock dividends paid. Among the more important of these are the following which are considered below.

1. Hybrid Stock Dividends
2. Privilege Stock Subscriptions
3. Optional Dividends
4. Fractional Shares
5. Unpaid Stock Dividends on the Balance Sheet

HYBRID STOCK DIVIDENDS

A practice which often gives rise to a situation similar to a stock dividend is reclassification of stock. A stock reclassification may take one of a variety of forms, but the most common type is what is known as a "split-up." The essential characteristic of a stock split-up is that it involves the multiplication of the number of shares of a given class by reducing the theretofore par or nominal amount per share. Sometimes the stated amount per share is reduced by converting the stock from par to no-par with a

lower stated amount, or vice versa. In principle, all that is necessary is to recall the old stock certificates and to distribute new ones representing the new series. A stock split-up does not in itself require change in dollar capitalization, for the total par or nominal amount of the new series remains the same as that of the stock replaced. If the stock both before and after the split-up consists of no-par shares without any stated value, the effect of a split-up is simply to increase the number of outstanding shares in proportion to the additional shares issued.

In practice, a split-up is frequently combined with a change in dollar capitalization by a transfer from earned surplus to capital stock. This occurs usually when the old stock, for some reason, is not recalled; new certificates being issued for the increase in shares outstanding. Stock issues of this type are really hybrids, being neither a stock dividend nor a split-up, but smacking of both. The practice is highly objectionable, for it is neither logical or sound economically. Further than this, hybrid issues lead to unnecessary confusion in the financial markets, when such issues are termed "stock dividends."[21] Recapitalizations falling under the hybrid class if unavoidable in certain situations, are, in the interest of accurate information to the investing public, best treated as in effect split-ups, and should be so designated in announcements to stockholders.[22] It should perhaps be emphasized that the payment of real stock dividends, whether of the large sporadic kind or the small, periodic type, if accompanied with only a nominal per share transfer from earned surplus to capital stock is not a stock split-up but a stock dividend improperly accounted for. The remedy here is for corporations either to refrain from paying stock dividends or to account for the transaction properly. What constitutes adequate ac-

[21] The reason for the transfer of some amount from earned surplus (or capital surplus) to capital stock is probably to comply with a particular state law governing issuance of new shares. In cases where the old stock is not recalled, the new shares issued represent an addition to shares already outstanding and hence require capitalization of surplus by an amount at least equal to the legal stated value of each share so issued. Two recent cases will illustrate the practice.

(1) On June 29, 1936 the Reynolds Spring Company issued 148,566 common shares with a par value of $1 per share to stockholders of record of June 15, "as a 100 % stock dividend." In connection with this distribution, $148,566 was transferred on the issuer's books from earned surplus to capital stock. (For other particulars see New York Stock Exchange listing application No. A-10576, dated June 12, 1936.) The table given below shows certain results before and after the doubling of outstanding shares.

	Before Split-up	*After Split-up*
Per share capital stock plus paid-in surplus	$ 8.30	$ 4.65
Market price range (From Moody's 1937 Manual):		
1936—to June 15 (date books closed)	$27.00 to $55.25	–
1936—after June 15	–	$25.00 to $36.25

(2) On February 1, 1936 the Motor Products Corporation issued 195,627 common shares without par value but with a stated value (minimum issue price under Stock Corporation Law of New York State) of $10 per share, "as a 100 % stock dividend" to stockholders of record December 20, 1935. In connection with this distribution, $1,956,270 was transferred on the issuer's books from capital surplus (paid-in surplus in this case) to capital stock. (For further particulars see New York Stock Exchange listing application No. 10450, dated January 20, 1936). The market price range of the stock (from Moody's 1937 Manual) was as follows: before split-up, $17.125 to $69.00; after split-up, $28.375 to $43.50 (1936).

[22] The designation in financial parlance of hybrid issues of the type referred to as stock dividends is not due to any inherent vagueness in the split-up device either in theory or in practice. Both the use and the circumstances which motivate the use of a stock split-up are fairly well understood. The practice, moreover, is a recognized expedient during the upswing of business activity. The denomination of a split-up as a stock dividend is rather due, it is believed, to a general human inclination, in times of business prosperity, to look upon business developments as optimistically as possible. Viewing the division of outstanding shares into 2 for 1 or even into a higher ratio as occasioning the receipt on the part of stockholders of something in addition to what was already had is but one example of the general state of outlook of the business community during an era of recovery and prosperity. It is but one instance of the "excited responses" in the stock market during a period that brings in its train rising prices, increased production, wider profit margins and general corporate expansion. Specifically, the source for the optimistic interpretation of a split-up probably lies in the expected favorable effect upon the price of the stock so split-up. This general impression in the market has in recent years been the subject of statistical study. It was found that the price of a stock after a split-up was, generally speaking, higher than the price thereof immediately before, with due allowance in the calculation for the increased number of shares. See J. C. Dolley, Characteristics and Procedures of Common Stock Split-Ups, *Harvard Business Review* (1933), Vol. 11, p. 316; ibid, Vol. 12, p. 74.

counting was discussed in the section preceding.[23]

PRIVILEGED STOCK SUBSCRIPTIONS

When an enterprise is first launched, the consideration received for capital stock issued is the fair market value of the property or service, and the face value of the cash, acquired thereby. After the enterprise is established, subsequent financing may create the need for selling additional stock. A question which arises in this connection is the price at which the stock should be offered. It is believed that in the fair market price which the stock commands exists a sound basis on which to offer sale of additional stock. Use of market price does not imply that the fairness of this price is endorsed, much less guaranteed, by the directors of the company as a long-period proposition, but simply that the price is an objective fact that requires recognition at the particular time. The criterion of fair market price as the offering price would seem to be applicable whether the stock is sold to (1) the public, (2) old stockholders, (3) customers, or (4) employees. Frequently, however, the stock is offered to old stockholders and employees at a price less than what the stock could sell for on the open market.[24] Such offers or rights to subscribe are known as privileged subscriptions.[25] Certificates evidencing this privilege are distributed at time the "rights" are declared by the corporation. The rights must be exercised within a stipulated period, usually sixty days, either by the recipient or his transferee.

To the extent that the right to subscribe is at a price below what the stock will sell for on the open market, a situation is created which from the corporation's viewpoint is essentially similar to a stock dividend. In the case of a straight stock dividend, the subscription price for the additional issue contemplated is zero and the corporation itself evaluates the stock by capitalizing earned surplus, the per share evaluation constituting in effect the issue price. In the case of a privileged subscription, the right to subscribe attached to one old share is equivalent to a stock dividend and, when the right is

[23] Remington Rand, Inc., affords an illustration of the point made as to periodic stock dividends improperly accounted for. Since July 1, 1936, this company has issued quarterly stock dividends of 1% on outstanding common stock, which is a little more than 4% per annum. On its books the issuer transferred only $1 per share for dividend stock so issued. This was the minimum issue price as the common stock had a par value of $1 per share. Other particulars are given below, based on data published by Standard Statistics Co., Inc. (See also New York Stock Exchange listing applications for this company.)

Year Ending ing June 30	Earnings Per Share	Range of Market Price	Evaluation of Stock Dividend of 4%: By issuer	Evaluation of Stock Dividend of 4%: By recipient (Average market value)	Cash dividend per share
1937	$2.34	$17 to $29	$.04	$.92	$.85

During the four quarters ended June 30, 1937, the 4% stock dividend represented a payment of only $.04 per share, as far as the distributor's books were concerned. Judged by the market value of the stock dividend, the stockholder received much more than $.04 per share for the market value of the stock far exceeded the per share par value. From the stockholder's standpoint, a dividend of cash and stock was received which had a cash value of $1.77 ignoring selling expense of dividend stock. To our mind, this amount should have served as the per share deduction in earned surplus, with offsetting credits of (1) $.92 partly to capital stock and partly to paid-in surplus and (2) $.85 to cash. Stockholders have a right to feel that earnings distributed in the form of stock instead of cash are not used again for further dividends, cash or stock. If the sum so left fictitiously in earned surplus is never made the basis of future dividends, it gives rise to the danger of conveying to stockholders who do not understand the situation, the impression of a larger back-log of earnings available for future distribution than is the fact. If the sum is later made to serve as a basis of a further dividend distribution, it has the same effect as declaring dividends out of paid-in capital.

[24] The price differential is probably due chiefly to the absence of the usual financing expenses incurred under alternative selling arrangements. For other reasons explaining the practice see Burtchett, F. F., *Corporation Finance* (1934), pp. 486–489; Montgomery, R. H., Editor, *Financial Handbook* (1933), p. 539.

[25] The privilege referred to here is right to buy stock at a price below prevailing market price. The term "privileged subscription" is also used to refer to the so-called pre-emptive right of existing stockholders to subscribe to new issues proportionate to their holdings, before such new stock is offered to the general public or to stockholders on any other than a pro rata basis. A privileged subscription in this sense is valuable only if it is accompanied by a preferential subscription price offer.

evaluated, resembles a stock dividend of so much per old share outstanding.[26] The basic fact about a stock right, therefore, is that it represents a portion of the subscription to stock at the market price which is expected to come into existence after the rights are exercised—a portion which the corporation itself contributes by capitalizing earned surplus. The following entry illustrates the proper treatment, upon issuer's books, of stock rights exercised in connection with the sale of new stock:[27]

August 27, 19—

Cash	$260,000	
Earned Surplus	75,000	
Capital stock—common, par value per share, $25		$125,000
Paid-in surplus		210,000

To record issuance of 5,000 shares to common stockholders of record August 13, on the basis of one share of stock for every five shares of the total of 25,000 shares outstanding, according to resolution of directors declaring rights, July 1, 19—. The issue price of $67 is the expected fair market value of the stock after the new issue is outstanding and is arrived in the manner indicated below. $70 is market price at date rights are declared. $52 is privileged subscription price for new shares.

25,000 shares at $70 each	=	$1,750,000
5,000 shares at $52 each	=	260,000
30,000 shares at $67 each	=	$2,010,000

OPTIONAL DIVIDEND

Dividends may be declared payable in stock or cash at stockholder's option. The option is usually between a stated amount of cash and a stated fraction of a share. Some preferred stocks give the holder thereof the option to take cash or common stock at regular dividend dates.[28] Though comparatively rare in occurrence, there are also some bonds on the market which give a similar option, the choice here being interest in cash or interest in the form of common stock.[29] There are common stocks carrying the optional dividend privilege, but the cases on record are relatively few. The practice of optional dividends has recently taken on new importance under the 1936 revenue act. According to an express provision under this act, optional dividends are taxable in hands of recipients whether accepted in cash or stock and thus deductible, on the corporation's return, from undistributed net income subject to surtax.[30]

What is the proper amount to charge against surplus for the portion of an optional dividend elected to be taken in stock? The existence of a choice between cash and stock may suggest that there is a parity of values between the two alternatives from the standpoint of the corporation. If this suggestion is taken as a clue for sound procedure, the principle may be formulated as follows: the charge to earned surplus for the portion of the dividend paid in stock is the amount of cash the right to receive which is surrendered by the stockholders who take the stock option.[31] Assume, for example, that

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[26] A stock right may be evaluated by the use of the formula given below. The calculation and the results are theoretical, however, and may not exactly obtain in practice.

$$V=\frac{M-S}{r+1}$$

Where—
- V is value of one stock right
- M is fair market price of old stock
- S is privilege subscription price per share
- r is number of shares of old stock entitled to one share of new stock.

An example follows. Suppose that a corporation declares rights to existing common stockholder to subscribe to common stock heretofore unissued at rate of one share for each five shares held. Assume that fair market value of the stock is deemed to be $70 per share and that the privileged subscription price is $52. The value of a right attached to one old share is

$$\frac{\$70-\$52}{5+1}=\$3.$$

[27] Cf. Paton, W. A., Editor, *Accountants' Handbook* (1932), p. 945.

[28] Optional dividends became increasingly popular in the financial boom years 1927–29. These years saw frequent issuance of preferred stocks which, among other features designed to add to the attractions of the security, gave the holder thereof the option to take the stated dividend in cash or in common stock. This profit-sharing arrangement gave senior securities somewhat of a speculative flavor in a generally bull market. For examples, see Commercial Investment Trust $6 Convertible Preference, Optional Series of 1929; American Cities Power and Light Corporation, Class A, Optional Dividend Series; Blue Ridge Corporation, Cumulative, Optional $3 Convertible Preference Stock, Series of 1929.

[29] For an example see Warner Bros. Pictures, Inc. Optional 6% Convertible Debentures, due 1939, issued in 1929.

[30] For an extended discussion of tax phase see author's previous article in the ACCOUNTING REVIEW (1936), Vol. XI, p. 373.

[31] The above principle was followed by Spencer Kellogg and Sons, Inc., when it declared an optional

	First Basis—Permissive Under Existing State Laws	*Second Basis—Minimum set by New York Stock Exchange*	*Third Basis—Proposed by this study*
Net profit before bond interest and dividends	$156,000	$156,000	$156,000
Interest on 6% bonds—one share of common stock issued in place of each $60 of cash interest: 1000 shares charged against earnings at—			
(a) Stated value of $25 per share	25,000	—	—
(b) Consideration price of $60 per share	—	60,000	—
(c) Fair market value of say, $65 per share	—	—	65,000
Net profit before preferred dividends	$131,000	$ 96,000	$ 91,000
Dividends on 6% preferred stock—1/10 of one share of common stock issued in place of each $6 cash dividend: 600 shares charged against earnings at—			
(a) Stated value of $25 per share	15,000	—	—
(b) Consideration price of $60 per share	—	36,000	—
(c) Fair market value of, say, $65 per share	—	—	39,000
Net profit before common dividends	$116,000	$ 60,000	$ 52,000
Dividends on common stock—1/10 of one share of common stock issued for each outstanding share: 800 shares charged against earnings at—			
(a) Stated value of $25 per share	20,000	—	—
(b) Paid-in capital of $62.50 per share	—	50,000	—
(c) Fair market value of $65 per share	—	—	52,000
Net profit carried to earned surplus	$ 96,000	$ 10,000	$ -0-

a corporation declares an optional dividend payable in $5 cash per share or 1/20 of one share for each share on 10,000 outstanding shares. Assume further that 30% of the outstanding stock elected to receive cash, the remainder requesting stock. The amount of cash alternative surrendered is 7000×5 or $35,000. This amount becomes the charge to earned surplus upon the issuance of 350 shares of dividend stock. The facts in the example may be summarized as follows:

3,000 shares,	on which is distributed $5 per share in cash	$15,000.00
7,000 shares,	on each share of which is distributed 1/20 of a share, making an aggregate of 350 shares valued at $100 per share	35,000.00
10,000 shares,	on which a total dividend is declared of	$50,000.00

The objection to the foregoing basis is that it overlooks an important consideration, namely, that the stock option would not be taken unless it had a market value in excess of the cash option. Fair market value would therefore appear the proper criterion in the case of dividend stock issued under an optional dividend declaration, the same as if a straight stock dividend had been declared.[32] The 350 shares of dividend stock should accordingly occasion a charge against earned surplus in the amount of the aggregate fair market value represented by such shares.[33]

dividend at June 14, 1937 on its capital stock. From its application to have the dividend stock listed on the New York Stock Exchange is the following excerpt: "... a dividend was declared ... payable at the election of each stockholder either in cash or in capital stock of the Company on August 16, 1937 to stockholders of record ... August 2, 1937, either (a) at the rate of $.50 per share in cash, or (b) at the rate of one share of capital stock for each 50 shares ... now outstanding. ... The sum of $25 will be transferred from surplus ... to capital ... for each share ... issued in payment of the aforesaid dividend, such sum representing the amount of cash waived by the stockholders to whom such stock is issued by reason of their not electing to receive such cash." Application to List, No. A-10944 (July 9, 1937). The company's latest balance sheet shows only one class of stock, no-par value, stated at $20 per share.

[32] The stockholder has a right to expect that when he surrenders the right to receive cash and takes stock instead, the stock so received is evaluated by the issuer for the purpose of determining earned surplus to be capitalized, on the same basis used by him in deciding whether to take stock or cash. An evaluation less than this amount would operate to make the same earnings available for further dividends.

[33] The example given below compares and contrasts three bases of booking an optional dividend or interest paid in capital stock theretofore unissued. The first

FRACTIONAL SHARES

Another question raised by the payment of stock dividends is that of fractional shares and how best to account for them on the books of the issuer. The question is closely identified with the practice of periodic stock dividends. It is not uncommon for a corporation following such practice to have constantly outstanding thousands of fractional shares. The modest block of shares held by the average stockholder combine with the frequent small dividends in stock to make the accounting for fractional shares a more or less of a continuous problem for the distributor. Perhaps the simplest procedure is the issuance of scrip certificates in lieu of fractional shares.[34] These certificates in their aggregate would then represent the fractional share interest in stock dividends declared. Illustrative of the entries made at (1) date of dividend declaration and (2) date of payment, are the following:

(1)

June 20, 19—

Earned Surplus	$75,000	
Dividend Payable in Common Stock		$75,000

Declaration of second quarterly stock dividend payable on July 10, 1937, to common stockholders of record June 30, 19—, one share of common stock at the offering price of $25 per share of said stock on the New York Stock Exchange at the close of business on March 31, 19—, for each 100 shares held of the 300,000 shares outstanding, according to directors' resolution No. ___ passed this day.

(2)

July 10, 19—

Dividends Payable in Common Stock	$75,000	
Unissued Common Stock		$45,000
Scrip Certificates		30,000

Payment of stock dividend, the same being declared June 20, 19___, in accordance with directors' resolution No. ___, passed that day, and now paid as follows:

Issuance of full share certificates, total	$45,000
Issuance of scrip certificates for fractional shares, total	30,000
Total dividend	$75,000

Several methods of disposition are open in the treatment of outstanding scrip certificates.[35] Chief among such methods are two:

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represents a basis which is possible under most state corporation laws as they exist to-day: a charge to earned surplus of the stated value per share issued. The second follows the principle first outlined in the text. This principle is in harmony with the following regulation of the New York Stock Exchange as announced on April 30, 1930: "In cases where stock is issued . . . as interest upon funded debt or as a dividend upon stock of another class with a cash alternative the amount of such cash alternative measures the minimum amount properly to be charged against . . . Earned Surplus." The third basis follows the principle advocated in this study.

Suppose that a corporation has outstanding $1,000,000 par value optional bonds carrying 6% interest, with the right to receive one share of common stock having a stated value of $25 per share, in lieu of each $60 of cash interest. Suppose further that this corporation has issued $600,000 par value preferred stock carrying a stated dividend of $6 per share, with a similar option to the holder thereof to take cash or common stock; and that 8000 shares of common stock was sold for $62.50 per share. The securities outstanding are thus as follows at the indicated date:

December 31, 1936

6% bonds, aggregate par value	$1,000,000.00
6% preferred stock, aggregate par value	600,000.00
8000 shares of common stock, stated value $25 per share	200,000.00
Paid-in surplus	300,000.00
Total consideration for securities issued	$2,100,000.00

Assume that the 1937 net profit available for bond interest and dividends amounted to $156,000.00.

As will be seen from the table given above, there is an wholly illusory appearance of prosperity under the results of the first basis of accounting. The total earnings before interest and dividends amount to 7.43% on the total capital paid in for the securities outstanding. Notwithstanding this, such earnings are sufficient to pay 6% on bonds and preferred stock (representing 76% of the consideration received for securities issued) and leave a return of 23% on capital paid-in by the common stockholders! The appearance of profitability is further misleading to the security holder, who does not understand the situation, because in his eyes, judging from the market value of the stock distributed, there is a 6.5% return on the bonds and preferred stock and a 10.4% return on the common stock. In addition to this, there is created a back-log of earnings of $96,000 available for future distribution—an amount which itself is nearly two-thirds of the earnings before interest and dividends!

[34] Scrip certificates used in connection with fractional stock dividends is not to be confused with a scrip dividend, which is a dividend paid in promissory notes of the issuer and is in effect a deferred cash dividend.

[35] Some companies avoid the issuance of scrip certificates by paying cash for fractional share interests in stock dividends declared. The practice of Sears, Roebuck and Company is an example of a combination of this method with an option to stockholder to apply his fractional share dividend credit as part payment for a cash purchase of a full share. Reproduced below is a copy of the directors' resolution of November 17, 1930, declaring two quarterly stock dividends:

RESOLVED, that quarterly stock dividends be and the same are hereby declared, payable, respectively, February 1, 1931 and May 1, 1931, to stockholders pro rata in

The scrip certificates may be (1) turned in as part payment on cash purchase of a full share, or (2) held by original recipient or his transferee until enough is accumulated to exchange for a full share. Under either (1) or (2), cancelled certificates are charged to the account "Scrip Certificates" and credited to capital stock to reflect issuance of full shares. If the period within which scrip certificates must be converted into regular stock is specified, expired certificates should be charged to Scrip Certificates and credited to Earned Surplus. This entry has the effect of reversing the original entry setting up stock dividends declared to the extent of the unclaimed dividend. The amount involved under such an eventuality is likely to be small.[36]

UNPAID STOCK DIVIDENDS ON BALANCE SHEET

Balance sheet display of unpaid stock dividends presents a problem that is different from the treatment of cash dividends declared but unpaid. In the latter case, the unpaid dividend constitutes a liability of the declaring corporation, continuing until liquidated by cash disbursement. In the former case, no cash payment is contemplated. Moreover, a stock dividend may, unlike a cash dividend, be rescinded prior to actual issuance under authority of the directors. It would therefore be incorrect to show stock dividends payable as a liability. The alternative open is to indicate the item in the worth section.[37] Methods commonly found in practice are: (a) notation in net worth section, (b) notation in footnote to a net worth item, and (c) dollar amount, with or without share information, shown as a separate item in net worth.[38] Method (c) appears more satisfactory than the others

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the ratio of one share to each 100 shares held by stockholders of record at the close of business on the respective twentieth business day prior to the above respective dividend payment dates;

AND BE IT FURTHER RESOLVED, that in making payment of said stock dividends, no scrip certificates for fractions of shares shall be issued, but the equivalent thereof shall be paid to stockholders in cash at a rate based on the bid price for the stock of this Company on the New York Stock Exchange at the close of business respectively on the twentieth business day prior to the above dividend payment dates, or that in the alternative, if the stockholder desires to obtain a share of said capital stock in lieu of accepting cash, he may do so by depositing in the mails before twelve o'clock midnight on the day next succeeding the twentieth business day prior to said respective dividend payment dates, a letter addressed to the Treasurer of this Company, Arthington Street and Homan Avenue, Chicago, Illinois, containing written notice of such desire, together with an amount in cash representing the difference between the amount of cash equivalent of his fraction of a share and the price of one share of said capital stock, at a rate based on the offering price for said stock on the New York Stock Exchange at the close of business on said respective twentieth business day prior to said respective dividend payment dates, and in such event such stockholder shall be entitled to receive one share of said capital stock.

[36] Typical of the phraseology used to cover issuance of scrip certificates in connection with stock dividends declared are the ones given below.

(a)
Sun Oil Company
(From Listing Application A-10701, October 21, 1936, Approved by New York Stock Exchange)

"No certificate for fractions of a share will be issued in payment of said stock dividends. However, the Company will issue scrip certificates representing such fractional interests as its records require, which scrip certificates may be sold or consolidated with other scrip certificates issued in payment of this or other like dividends in aggregate amounts representing full shares and exchanged for certificates for shares of such stock. No dividends or interest shall be payable or shall accrue with respect to such scrip certificates nor shall the holders be entitled to vote or to any other rights of a stockholder with respect thereto. The right to consolidate scrip certificates is unlimited as to time."

(b)
General Refractories Company
(From Listing Application A-10900, May 21, 1937, Approved by New York Stock Exchange)

"Scrip for fractional shares may be consolidated at any time and exchanged for full share certificates. Until so exchanged scrip for fractional shares will not entitle the holder to participate in future dividends, or to vote at meetings of shareholders. The Company will at all times purchase scrip from the shareholders desiring to dispose of the same, at one-eighth less than the last sale of stock on the New York Stock Exchange. As soon after July 1, 1940 as practicable the Company will sell the shares of its common capital stock reserved for issuance against scrip then outstanding. The proceeds of the sale of such stock shall be held by the Company for the benefit of the holders of said scrip whose only right thereafter shall be to receive their pro rata share of such cash without interest upon the surrender of such scrip."

[37] An exception to this statement is dividends payable in stock or cash at option of stockholder. Optional dividends declared but not yet paid are best shown as a liability to the extent of the amount of the cash alternative in view of the uncertainty of just what portion will be demanded in stock.

[38] Examples of the foregoing methods are given in the following.

because it shows at a glance the contemplated increase in capital stock. The chief criticism of (a) and (b) is that frequently under these methods the charge to earned surplus for the dividends declared is added back to that account on the balance sheet.[39] Unconverted scrip certificates should be shown as a separate item of net worth. One method is to have the item immediately follow capital stock. Another method is to show the item under the capital stock caption, with the money value of the unconverted certificate going into the total shown for capital stock.[40]

(a)

The following notation was given at the end of the net worth section of the balance sheet of R. H. Macy Co., Inc. under date of January 31, 1931:

"Note: Stock dividends declared of 68,461 shares of common capital stock, payable on February 16, 1931, increased the shares to be then outstanding to 1,437,-672."

(b-1)

The following notation was given as a footnote to the item of earned surplus in the balance sheet of International Business Machines Corporation, under date of December 31, 1936:

"(C) Subject to a stock dividend of $1,190,281.89 payable on April 1, 1937, or as soon thereafter as practicable."

(b-2)

The following notation was given as a footnote to item of capital surplus in the balance sheet of Compressed Industrial Gases, Incorporated, under date of June 30, 1936:

"(E) On July 9, 1936, a dividend of sixty per cent was declared out of capital surplus . . . payable on August 15, 1936, in shares of capital stock without par value to holders of record August 1, 1936. Giving effect to the distribution of such stock dividend the sum of $229,195.00 would be transferred from capital surplus to capital stock account, after which the shares of capital stock without par value outstanding would be 122,237 and the amount of stated value . . . [stated value per share is $5.00] . . . would be $611,185.00 . . ."

The surplus items on the balance sheet appeared as follows:

"Surplus:

Capital	$882,087.01
Earned	553,465.01

(c-1)

The following item appeared in the net worth section of the balance sheet of Sears, Roebuck and Co., under date of December 31, 1928:

"Stock Dividends Payable February 1st, 1929 and May 1st, 1929	$2,152,950.00"

(c-2)

Immediately after the capital stock item appeared the following in the balance sheet of the North American Company, under date of December 31, 1933:

"Dividends Payable in Common Stock	$1,629,547/60"

[39] See, e.g., the instances given under (a) and (b) in preceding note.

[40] The balance sheet of the Scott Paper Company, under date of September 27, 1936, shows the following:

"Capital Stock:

Common Stock: No par value authorized 1,000,000 shares (outstanding . . . 284,978 shares and 37.98 scrip)	$506,705.96"

The Commercial Investment Trust Corporation balance sheet of December 15, 1935, shows as a separate item under capital stock:

"Common stock scrip outstanding, equivalent to 247 shares and 87/208 of a share	$1,979.36"

In the balance sheet of Swift and Company under date of October 27, 1934, appeared the following notation under the capital stock item:

"(Of the issued capital stock there are 57 shares held for exchange on warrants issued in connection with the Stock Dividend declared in 1918)."

The balance sheet of the North American Company under date of December 31, 1936, showed the following:

"Common Stock:
(Authorized: 50,000,000 shares without par value)

Stock	$85,667,250
Scrip	83,170

Since the Company changed its dividend policy as to common stock to cash basis in 1933, the amount shown for scrip is the remainder of unconverted scrip representing fractional stock dividends declared at least three years prior to balance sheet date.

ACCOUNTING POSTULATES: AN ANALYSIS OF THE TENTATIVE STATEMENT OF ACCOUNTING PRINCIPLES

George R. Husband

Roget's "Thesaurus" presents the term "account" in the company of two different groups of words, the meanings of which, although not specifically inconsistent, are, on the other hand, not necessarily compatible. In the one case the term "account" is synonymous with list, enumeration, inventory, description, summary, of facts or occurrences, narrative, history, recital of transactions, etc. In the other case "account" has reference to the results of reasoning, the formation of an estimate, a sizing up, an evaluation, a rating, a ranking, a passing under review with all things considered, etc. Accounting may thus, in the one sense, be said to be a statement or narrative of the historical facts or business transactions which have affected the financial status of a given business entity. In the second sense accounting may be said to involve a presentation of the bases necessary for an evaluation of the financial status of the business entity, not merely in terms of its historical experience but also in terms of its present economic relationships. While, as stated, these two concepts of the scope of accounting are not entirely exclusive, neither are they perfectly inclusive.

Most objects are subject to different evaluations. Thus one man may view war as a glorious opportunity for the expression of the noblest sentiments of man.[1] Another may regard war as a creation of the devil wherein mankind reverts to barbarism. But for both men the historical facts regarding war, when they are all discovered and presented, are the same. Differences appear in evaluation. So too with accounting. The owner of a business may be perfectly satisfied with an evaluation couched in terms of historical facts; his present may, for certain purposes, be set forth properly in terms of the cumulative remainders of past transactions. There are others, however, such as prospective creditors or investors, the management, the government, the public, etc., whose evaluation of the business is likely to be much more accurate, or whose conduct relative to the business will be much more intelligent if the status of the business is presented in current values. In combining the economic factors of land, labor, and capital, management is less interested in historical experiences than in current relationships. If it desires to retain its cost advantages in submitting its bid in the price setting process cost should be given much less weight than cost of replacement. Prospective investors and creditors are also in a much better position to evaluate their alternative investment opportunities when they are provided with a picture of business drawn in terms of present values. Similarly, assessments of property for taxation are properly related to present values. Prospective creditors, investors, consumers are in a sense prospective purchasers of parts of the business. Their viewpoint of the business, therefore, is that of its sale or purchase, not as an enterprise about to be liquidated, but as a going concern.

In formulating fundamental postulates to govern accounting procedure, therefore, one must be guided by the purposes which the accounting procedure is designed to serve. In the past the viewpoint and evaluation of the owner have been accepted as dictating basic principles. Accounting has been conceived almost entirely in terms of historical cost and historical transactions. The needs of prospective creditors and investors, and the needs of management have been given too little consideration. These individuals are not, and should not be, much interested in the undepreciated portions of past cost incurred during prior periods of either higher

[1] See *Harper's*, July 1935, "Men Like War," Leo C. Rosten.

or lower price levels. From their viewpoint past cost, except insofar as it serves to indicate the future, may be forgotten; their primary interest is in current and future economic relationships. The fact that a business may have been a leader in its field in the past is of no more than historical significance if the business is a weakling at present. The schema of accounting does not rest upon natural laws. Rather it is man made. As such, therefore, it must be set forth relative to its purpose, relative to the ends which accounting is primarily designed to serve; accounting is a procedure which remains logical only when conceived in terms of the end or goal originally established. For other purposes any particular procedure may be distinctly illogical.

It is, then, in terms of purposes, in terms, if you will, of the two concepts of accounting that postulates hitherto established have provided the bases for debate and conflict. While cost may be a perfectly rational basis for certain purposes, present value may be much more desirable for other purposes. The introduction of the concept of ends or purposes serves to eliminate much of the argument which has been waged regarding accounting procedure and accounting evaluation. Until this is recognized and until accounting postulates are set forth clearly in terms of well defined and well delimited goals no set of accounting principles can be subject to universal acceptance. Conflict can be eliminated only by eliminating its basis. The Committee states with commendable frankness that valuation is not the main consideration dictating the postulates which it presents but that it is concerned rather with "the allocation of historical costs and revenues to the current and succeeding fiscal periods."[2] Whether this approach affords a satisfactory solution for the accountant's difficulties is probably as much a problem for the businessman, the accountant's employer, and the accountant's public as it is for the accountant himself. It would appear to be necessary, however, to recognize that goals other than the historical ownership goal exist, and further, that they may be better served by other than usual orthodox procedures.

A second influence which demands consideration in the formulation of accounting postulates is the existence of certain instances wherein it is necessary to veer away from the theoretical logic of a given situation because of practical requirements. Thus even though it may be established logically that income is earned with production and not with sale, except insofar as the sale is an act of production, it may be practical to accept the sale as the point of crystallization of income. Or again, while it may be logically and economically proven that appreciation is income, it may be impractical to concede its universal recognition because of its instability and because of the overly optimistic attitude of human nature. A further influence on the side of practicality is the limiting influence of cost. While one may admit the theoretical accuracy of the conclusion that appreciation is income the expense occasioned by the appraisal necessary to its determination may dictate that it be ignored. For a similar reason the accountant may solve the problem of depreciation by deciding in favor of the straight-line rather than the output or other methods. Accounting is definitely a means to an end. When the ends are served without any significant degree of error theory may be sacrificed to practicality.

A third consideration of importance which must be kept in mind in the formulation of postulates is to be found in legal requirements, the requirements of state statutes regarding par value, the declaration of dividends, etc., the requirements of federal and state income-tax laws, etc. While, as the Executive Committee of the American Accounting Association states, "It is not necessary, however, to adopt in accounting practice the expedients permitted under any given law,"[3] there is a constant tendency for both misunderstanding and practicality to dictate such adoption.

Any set of fundamental accounting prin-

[2] Reprint of the "Tentative Statement," p. 7.

[3] Reprint of the "Tentative Statement," p. 16.

ciples or postulates must therefore be formulated and accepted as holding true only within the scope of their own delimitations and of the purposes which they are conceived as serving. Further, since they are too often ignored in the reading and using of published statements, such delimitations and purposes should always be set forth clearly. In periods of relatively stable price levels and for the normal ordinary situation the usual accounting postulates appear to be acceptable. It should be recognized, however, that when price levels are subject to radical fluctuation, and in circumstances other than normal, ordinary accounting postulates may be subjected to many stresses and strains. In the long run economic reality may compel departure from the accountant's more or less arbitrary schema in order that some of the more basic requirements of management, prospective creditors, investors, etc., may be better served. It appears, therefore, that while the usual superstructure may be reared in terms of the usual accounting requirements, reality would dictate that it be reared on a foundation sufficiently inclusive to allow for the long-run necessities of economic reality. In any particular instance the latter will compel the conclusion whether the accountant concedes it or not.

It is therefore in this spirit and with these delimitations in mind that consideration is given to the Executive Committee's "Tentative Statement of Accounting Principles." The postulates set forth by the Committee are limited to those necessary to provide a basis for the preparation of published corporate "reports of profits and financial position" and are grouped under three main headings: (1) "Costs and Values," (2) "Measurement of Income," (3) "Capital and Surplus."

COSTS AND VALUES

Postulate No. 1 states that "The accountant's valuation of physical assets at any given point of time involves the determination of what part of original cost should be written off to reflect consumed, expired, or lost usefulness, and what part should be carried forward as reasonably applicable to future operations." It should be noted that this postulate is based upon the viewpoint of certain of the owners who form a constituent part of the business. It is the assets representative of the commitment of the investment of the original owners, the subsequently accumulated surplus, and the investment of later investors who become a part of the corporation through the purchase of subsequently floated securities or the purchase of treasury stock, which are being divided into their income-statement and balance-sheet portions.[4] Or, in spite of the fact that the corporation must, in the last analysis, be resolved into terms of its constituent flesh and blood ownership and in spite of the fact that the fictitious entity can have no viewpoint, perhaps it would be more accurate to state that it is the commitment of the corporate owner which has taken form in physical assets which is thus being distributed. The balance sheets to be presented are therefore to exhibit the corporation's cost of future income, not the value of the corporation's future income.[5] In fact, from the standpoint of Postulate No. 1, since cost and value need be synonymous only at the time of purchase,[6] it may be well for the orthodox accountant to eliminate the term "value" from his vocabulary, using only the term "cost."[7] There would then be less danger of confusion.

[4] Stockholders who become members of the corporation through the purchase of stock from prior stockholders do not necessarily invest their funds in the corporation in toto (or vice versa they may secure a claim to an amount of corporate assets whose cost was greater than the cost of the stock which they purchase); it is therefore not their viewpoint which the accountant represents.

[5] If cost were always equal to the value of future income there could be no developed goodwill. Vice versa, there would be no failures. While in general, in the long-run, and on the average there is probably a marginal relationship between cost and the value of future income, no such relationship need exist in any given case.

[6] Cost and value are presumably equal at the time of purchase (where patents, machinery, etc. are developed within the plant cost and value need not be equal even at the time of origin) but they need never be equal thereafter. The discrepancy between cost and value may be especially great in the case of intangibles.

[7] The Committee entitles its first section "Costs and Values" but value plays little part in the postulates set forth there under, except in so far as the purchase is concerned. Dropping the term "value," or correcting the accounting procedure so as to present values, would

In the usual case assets purchased may be justly conceived as costs applicable to the revenue which they are to assist in earning during the remainder of their lives. The accountant frequently encounters difficulty, however, in allocating that cost to the respective and more or less arbitrary fiscal periods which the life of any given physical asset encompasses. This allocation is provided for in Proposition No. 3, which presumably would appear to better advantage if stated as a corollary to Proposition No. 1, to the effect that "Recognition invariably should be given to depreciation, depletion, and all other diminutions or expirations of cost, even when the amounts thereof are not subject to precise measurement and must be estimated. Estimations of costs applicable to future periods must be based upon business judgments, seasoned experience, and expert opinion, rather than rigid formula. In each enterprise and each industry reasonably consistent practices should be developed for determining the portion of a past cost that properly may be carried forward to future periods." One may concede the desirability of both Propositions No.'s 1 and 3 if the asset portions written off are properly determined. If they are not properly determined for purposes of Proposition No. 3, the accountant's presentations as per Proposition No. 1 will be in error. While it may be admitted that costs justly incurred may usually be properly conceived as a cost of the income to the earning of which the asset is to contribute, it is not true that if a proportion of cost is written off improperly, or is not properly written off, that the original cost remaining to be presented in the balance sheet is a true cost of the income to the earning of which the asset is to contribute during the remainder of its life. It is upon the basis of such somewhat extraordinary cases wherein an error of allocation has been committed that exception may be taken to Proposition No. 18, "Earned surplus should be credited or charged only with the following: the balance of the income account, as periodically reported; distributions to stockholders; the excess of the cost over paid-in capital of shares purchased for redemption, or of reacquired shares retired; and reductions of surplus reserves, set aside for such purposes as the protection of working capital or the coverage of sinking funds. Earned surplus should include no credits from transactions in the company's own stock or transfers from paid-in capital or other capital account."[8] If depreciation, depletion, etc., are not properly determined, it would seem that adjustments to surplus may be necessary in order that the proper division may be made as per Proposition No. 1 and in order that future depreciation, depletion, etc., may be properly determined as per Proposition No. 3. Proposition No. 4, which also would appear to better advantage if set forth as a corollary of Proposition No. 1 that "Costs charged off in accordance with these principles should not be reinstated as assets subject to reamortization, except as required corrections are reflected in revised income statements for each period affected" seems to allow for such correction. Proposition No. 4 represents a distinct step in advance.

Propositions No. 1 and No. 2 place depreciation in a key position. Logic probably would declare in favor of the output method, or one of the interest methods of computing depreciation. The straight-line method is permissible only by concession to the assumptions that price levels are more or less constant and that the quantity of business done each fiscal period will be more or less uniform, and to the further assumption of its practicality.

It should be noted that Proposition No. 1 approaches the cost remainders that are to be presented in the balance sheet mainly through the medium of the portion of the original cost remaining after the income statement is cared for. While this is the usual approach in respect to such assets as buildings, equipment, land subject to depletion, etc., it is frequently not the approach as respects inventory and land not subject to

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probably contribute to the elimination of numerous confused and useless arguments and in driving home a true conception of the aims which the Committee is attempting to promote.

[8] See later discussion regarding Postulate No. 18.

depletion. In the case of inventory, if it be included under the term physical assets, a common procedure is first to determine the amount remaining; the difference between it and the purchases plus the beginning inventory, ignoring other adjustments, is the income-statement portion, cost of goods sold. It should be noted, too, that unless the market value is accepted as the portion of cost remaining, Proposition No. 1 excludes the "cost or market whichever is lower" method of evaluating the inventory. In any case, the loss resulting from a decline in market values can scarcely be said to be the result of consumption, expiration, or lost usefulness of cost; the "cost or market whichever is lower" method of evaluating inventory therefore does not appear to be covered by Postulate No. 1. It should be noted, further, that in contrast to depreciation and depletion, the amount charged off because of a decline in market price is a requirement not of the income statement but of the balance sheet; and that it is with difficulty that it can be successfully contended that the part carried forward is the sum total of the amount which is "reasonably applicable to future operations." The whole of the cost of the inventory is really applicable to, or a cost of, future operations. The pertinent question is whether "cost or market whichever is lower" provides the accountant with cost which is "reasonably applicable to future operations" or with value which is "reasonably applicable to future operations." The conclusion appears evident that Postulate No. 1 does not permit the use of the "cost or market whichever is lower" method of evaluating inventory. Perhaps that is what the Committee intended.

Postulate No. 1 also has little meaning as far as non-depletable land is concerned. Similarly, in the case of temporary and permanent investments, assuming that since they are usually included in the classification, tangible assets, the terms "physical assets" would include them, Proposition No. 1 has little to offer.

Postulate No. 2 that "Where a substantial change in beneficial ownership has occurred, cost is measured by cash outlay or by the fair market value of property acquired in exchange for securities" is also in the nature of a corrollary to Proposition No. 1, explaining the terms "original cost" contained therein. It is probably acceptable without debate except that cost is usually conceived from the viewpoint of what the purchaser gives up and not from the viewpoint of what he receives. Thus the fair market value of the property acquired cannot be cost. Rather cost is the fair market value of the securities given. Presumably both the fair market value of the securities given and the property acquired will be equal in the normal case, however.

Postulate No. 5 that "The application of these principles should be broad enough to cover amortization of fixed assets through allowances for depreciation, depletion, and obsolescence, and reductions of inventory and investment costs to amounts allocable to succeeding periods" is somewhat ambiguous. Apparently it covers the criticism directed above at Proposition No. 1, since it might be said implicitly to admit the principle of "cost or market whichever is lower" in that it states "and reductions of inventory and investment costs to amounts allocable to succeeding periods." However, it is possible that the Committee had in mind only such losses as obsolescence, theft, etc. In reality the principle of "cost or market whichever is lower" is a concession to the viewpoint of management, creditors, prospective investors, etc. and is inconsistent with the ownership procedure of presenting historical costs. In so far as depreciation and depletion of fixed assets are concerned, such items are presumably covered by Proposition No. 3. The reduction of fixed assets because of obsolescence should constitute a debit to surplus, a charge against past income. Had the life of the assets been determined properly, there would be no lump-sum obsolescence. The cost would have been absorbed by the income of the past periods. Such a procedure is contrary to Proposition No. 18, however. Postulate No. 5 appears to add little to previous postulates.

Postulate No. 6 that "The excess of the

gross amount of an obligation[9] over the net proceeds received therefrom represents interest payable at maturity, and on a balance sheet the unaccrued portion of such interest should appear as a reduction of the face value of the indebtedness" is designed to eliminate the item "Discount on Bonds" from the asset side of the balance sheet. As such it is consistent with the economic determination of present values and should be subject to general acceptance. Perhaps "the excess of the gross amount of an obligation over the net proceeds received therefrom" should be more realistically termed "discount" or "prospective interest payable at maturity." At the time the obligation is issued the excess does not constitute interest; it becomes interest only after a period of time has elapsed.

Postulate No. 7—"If values other than unamortized costs are to be quoted they should be expressed in financial statements only as collateral notations for informative purposes" seems also to exclude the principle of "cost or market whichever is lower" as an acceptable method for evaluating inventories and investments, except in so far as market values are presented as collateral notations. Postulate No. 7 is consistent with the Committee's avowed intention of setting forth principles concerned only "with the allocation of historical costs and revenues to the current and succeeding fiscal periods."[10] The second interpretation of the term "accounting," namely, to provide statements which may be used as bases for proper evaluation, must be cared for through the medium of "collateral notations." Such information should include, presumably, notations of changes in the price level.

The statement that a "history of cost and cost amortization is a consistent record of actual occurrences measured according to an intelligible formula, and constitutes an essential starting point in financial interpretation"[11] is worthy of commendation. It is consistent with the viewpoint of ownership and is probably satisfactory for that purpose. It is difficult to understand, however, how the Committee, in view of its actual experience over the last thirty-five years, could declare that "there seems to be no sound reason for repeated adjustments of asset values for the ordinary changes in price levels commonly experienced from one generation to another,"[12] except in so far as the Committee believes that the more or less near future will not be subjected to a repetition of the experiences of the past thirty-five years. It is more than likely that the accountant's insistence upon this formality of the ownership principles and his resulting failure to serve the pressing needs of management, creditors and prospective investors have played no small part in the responsibility for the fact that "Present procedure is unsatisfactory in that it permits periodic revaluation of assets, up or down, in accordance with current price levels and expected business developments."[13] While in general, in the long run, and on the average, costs may be satisfactory for all purposes, accounting is concerned with the particular and the present. It is highly probable that it is not alone the "varying ideas of financiers and corporate executives as to what will be expedient, plausible, or persuasive to investors at any given point of time,"[14] that is responsible for this situation but that the force of economic need and reality, the force of economic compulsion exerts its influence as well.[15] If this is true, the accountant may well take heed since his orthodox procedure apparently fails to meet the broader requirements of business. It would seem, therefore, that the Committee should

[9] It should be noted that the postulates say little specifically concerning liabilities.

[10] Reprint of the "Tentative Statement," p. 7.

[11] Reprint of the "Tentative Statement," p. 8.

[12] *Ibid.*, p. 8.

[13] *Ibid.*, p. 7.

[14] Reprint of the "Tentative Statement," p. 8.

[15] Attention may be called to the fact that reliable corporations wrote off considerable portions of their asset values during the depression years. Thus the General Motors Corporation wrote off some $92,000,000 of assets, United Fruit $54,000,000, General Baking $12,000,000, Continental Can $6,000,000, Gillette Safety Razor some $8,000,000, U. S. Gypsum some $7,700,000, American Woolen $18,000,000, Consolidated Oil some $200,000,000, etc. Apparently such write-offs are an expression of economic necessity.

have vitalized Proposition No. 7 by providing that in cases where value departs from cost sufficiently to justify it, the statements should be presented in three columns: the first column containing figures based upon the postulates of the "Tentative Statement"; the second column exhibiting the same items adjusted to a current dollar basis; and the third column exhibiting present values. While the last two columns may be regarded as "collateral notations for informative purposes," they would serve other than the historical needs of the owners. If objections be voiced against the second column, the least that can be advocated is that schedules should be prepared exhibiting the dates upon which assets have been purchased. Such procedure would go far toward setting forth information which would "justify the forming of opinion as to the condition and progress of the business enterprise . . . ".[16] The accounts may well be kept in terms of cost as per the Committee's Postulates. The figures for the current-dollar-value column and the present-value column may be developed through proper work sheets, through appraisals, etc.

While the Committee states that "It would seem to be beyond the ability of the accountant to establish the propriety of some new basis of valuation which has no relation to past outlays or experiences of the business or industry,"[17] the accountant may properly accept the assistance of appraisers, the assistance of the market, etc. in order to determine such other bases, just as he accepts the assistance of others and of the market in determining the inventory figure, or the figures to be used for the purpose of exhibiting fixed assets, goodwill, etc. acquired at the time of consolidation. Since the accountant keeps the records exhibiting the physical existence of property and its cost experiences, and since the term "accounting" is subject to a dual interpretation, the accountant may well be charged with the duty of presenting values as well as cost remainders, provided that values can somehow or other be determined with an accuracy somewhat approximating that with which cost remainders are determined. The accountant has too long been thinking in terms of practical limitations rather than in terms of economic veracity and economic necessity. Cost is a practical basis, a logical basis for certain purposes, but when from the viewpoint of the creditors, prospective investors, the management, etc. its presentation constitutes a significant economic error, the accountant would appear to be called upon to eliminate such deficiency. The use of a three-column balance sheet would permit him to be loyal to his cost concepts without violating the requirements of others. It is to be hoped that Postulate No. 7 will be expanded so as to include such desirable economic presentations.

MEASUREMENT OF INCOME

Postulate No. 8 states that "The income statement for any given period should reflect all revenues properly given accounting recognition and all costs written off during the period, regardless of whether they are or not the results of operations in that period: to the end that for any period of years in the history of the enterprise the assembled income statements will express completely all gains and losses." While such procedure has many points of practicality in its favor, and while it is probably true that all costs sacrificed and all losses suffered are deductions from income or additions to deficits, the logical consistency of exhibiting all gains and losses crystallized during a particular fiscal period in the income statement of that period is subject to question. Costs and losses may be incurred which in view of their subsequent experiences cannot logically be construed as the cost of income earned by a particular fiscal period nor can they logically be exhibited as items to be charged against the net operating revenue of a given fiscal period. They may be true capital deductions, charges which should have been made against the income of prior years. Thus, if a corporation loses property as the result of a flood in a region where floods seldom occur, and there-

[16] Reprint of the "Tentative Statement," p. 4.
[17] *Ibid.*, p. 10.

fore were logically considered risks not subject to insurance, it would seem that such a loss is not, in toto, an operating cost of the particular fiscal period when the flood occurred and that neither should it be charged in toto against the operating profit of the period. Rather it appears to be a capital or surplus deduction, an item which, had the facts been known earlier, would have been charged pro rata against the income of all of the periods which benefited through the asset's existence. In reality the loss should have been accrued during the earlier years of the asset's life. In the absence of knowledge which would have permitted such accrual, however, corrections should be made through the medium of a charge to surplus. It is on the basis of similar reasoning that in the case of certain long-term undertakings, such as the construction of ships, the development of timber reserves, etc., the account recognizes income with partial completion.[18]

A statement exhibiting the income, costs, and losses of a business for the whole of its life from conception to the present may exhibit items such as those mentioned above as true income items or true costs, operating or non-operating, for the period under consideration. It does not follow, however, that they should be thus exhibited in the accountant's statements for a given fiscal period, even though for income-tax purposes they should be presented as costs, losses or income. Nor, further, is the expressed desire of Postulate No. 8 that "for any period of years in the history of the enterprise the assembled income statements will express completely all gains and losses" a sufficient reason for charging such costs, or losses against profits rather than against surplus. That the Committee itself recognizes the possible justice of this conclusion is evident from Proposition No. 13 which states that "When the income for any period or series of periods is found to have been inaccurately stated to such a degree that it is desirable completely to recast the accounts, at least one published report after such revision should include a corrected income statement for each prior period for which adjustments have been made." Certain of the inaccuracies which may be the cause for such a re-casting of statements, which is a very desirable procedure, surely have no place in a statement limited by the date line to the income and costs circumscribed by the beginning and end of a current fiscal period. Such costs when written off and such income when incorporated into the acounts are logically surplus corrections. Otherwise, Postulate No. 13 has little logical basis. Further, if the instruction contained in Postulate No. 20 to the effect that "Periodic reports should include analyses of capital stock and surplus accounts in sufficient detail to disclose the nature of the changes taking place during the accounting period, including increases and decreases in paid-in capital resulting from sales or purchases of shares" is obeyed, good rather than harm will result from a logical presentation. The logic of fiscal-period limitations demands, at least, that items of significant amount be thus exhibited.

The terms "all revenues properly given accounting recognition" in Postulate No. 8 might become the subject of much controversy. When are revenues subject to proper accounting recognition? Presumably Postulate No. 10 that "The operations section of the income statement should disclose the gross revenues from sales made and services rendered, . . . " and Postulate No. 11 that "The operations section of the income statement should be followed by an appropriate listing in reasonable detail of capital gains and losses, extraordinary charges and credits to income, including substantial adjustments applicable to but not recognized in prior years, extraordinary gains, losses and amortization resulting from factors other than current operations, gain or loss from the discharge of liabilities at less or more than their recorded amount, and other comparable items" supply the answer and are in a sense to be considered as corollaries of Pos-

[18] Note also the recent proposal of the Committee for the Twentieth Century Fund to the effect that the income-tax law should recognize accrued capital gains as income. While there may be practical difficulties in the way of the administration of such an amendment, there is much to be said in its favor.

tulate No. 8. While it may be admitted that "the income statement should disclose the gross revenues from sales made and services rendered" are there not situations where gross revenue should be exhibited when acts of production have been performed but where, technically, sales have not been made? Illustrations may be found in the case of gold mining, certain long-term contracts, the development of forestry reserves, etc. Or are these latter included within the meaning of the terms "services rendered"?

Logically, if income is earned, it is earned by production and not by sales. Presumably each step in the production process may be credited with its share of the revenue earned, although each step need not be productive of revenue as may be demonstrated by imputation when profits are turned into losses if discounts are not taken. Since the sale is one of the productive steps it is entitled to credit for its share of the revenue earned, but only for its share. Practically, however, the sale may be regarded as crystallizing the conclusion that revenue is earned and, further, as crystallizing the amount which is earned, allowance being made for uncollectible items. In the majority of cases the real relation of the sale to the revenue earning process is that of crystallization—both as regards the fact that revenue is (or has been) earned by the productive processes, and as regards the amount which has been earned. It is, therefore, reasonable to recognize income with sale. However, in cases such as the long-term projects previously mentioned, where it is reasonably certain that revenue is being earned by the productive processes and where the amount of such revenue can be determined with reasonable accuracy, a good case can be made for the recognition of revenue with production, especially where long-term processes make such recognition a practical necessity. If such is true, the Committee should take further pains to delimit properly the scope of the terms "all revenues properly given accounting recognition." Unless such is done, the "Tentative Statement" becomes the basis for further wrangling rather than a true basis for accounting procedure.[19]

The terms "all revenues properly given accounting recognition" may include within their scope the recognition of appreciation as income. There is no statement in the "Tentative Statement" to the contrary.[20] In fact, from the standpoint of the proposed third column of the income statement, that exhibiting present values, it is very desirable that appreciation should be presented as income, a non-operating income. From the viewpoint of creditors, prospective investors, managers, etc. such recognition would have considerable merit. But where does the Committee stand?

Postulate No. 9 that "The income statement for any given period should, where necessary, be divided into two sections, one showing particulars of operations for the period, measured as accurately as may be at the time, and the other showing realized capital gains and losses and extraordinary credits and charges resulting from income realization and cost amortization not connected with the operations of that period" must be considered together with Postulate No. 10 to the effect that, "The operations section of the income statement should disclose the gross revenues from sales made and services rendered; the elements of operating cost and expense incurred, including the amount of depreciation and other amortization of assets applicable; the amount of interest incurred on borrowed money, including debt discount and expense properly amortized during the year; income and profits taxes accrued; and all other increases or decreases in the equity of stockholders resulting from transactions of the period which are of a normally recurring nature," and Postulate No. 11 to the effect that "The operations section of the income statement

[19] The Committee entitles its second section the "Measurement of income" but says little that is specific as to "how" income should be measured.

[20] Presumably, by inference, the statement in Postulate No. 9 that one section of the income statement should exhibit "realized capital gains and losses" would exclude the recognition of "unrealized appreciation." The debate has been such, however, that a specific statement is required.

should be followed by an appropriate listing in reasonable detail of capital gains and losses, extraordinary charges and credits to income, including substantial adjustments applicable to but not recognized in prior years, extraordinary gains, losses, and amortization resulting from factors other than current operations, gain or loss from the discharge of liabilities at less or more than their recorded amount, and other comparable items."

Since Postulate No. 11 is to a considerable extent a repetition of the latter portion of Postulate No. 9 it would appear desirable to eliminate the section "realized capital gains and losses and extraordinary credits and charges resulting from income realization and cost amortization" from the latter postulate. Postulate No. 9 would then read "The income statement for any given period should, where necessary, be divided into two sections, one showing particulars of operations for the period, measured as accurately as may be at the time, and the other showing items not connected with the operations of that period," leaving Postulates No. 10 and No. 11 the task of indicating in detail the various specific considerations which each of the sections should exhibit. Certainly no exception could be taken to Postulate No. 9 if presented in such form. An accurate conception of the success obtained by any business demands that operating income and its costs, per se, be separated from those items which are not directly an aspect of operations.

A question may be raised, however, as to whether Postulates No. 10 and No. 11 provide the proper bases for distinguishing between operating and non-operating items. It is evident that in setting forth Postulates No. 10 and No. 11 the Committee is consistent with its basic determination to present accounting statements distinctly from an ownership viewpoint. To the owners such items as "the amount of interest incurred on borrowed money, including debt discount and expense properly amortized during the year; income and profits taxes accrued" are definitely a cost of the net income finally obtained. It is further evident that such items as interest and dividends received from temporary and long-term investments are aspects of proprietary net income. But whether such items are definitely a phase of the operations per se is subject to debate. Is it not possible that these items may be costs of ownership income and additions to proprietary income respectively without being phases of the operating income per se? It is obvious that the Committee conceives of operating costs and operating income as those items which are of a more or less "normally recurring nature." Non-operating items are those items which are extraordinary, of a non-recurring nature. Are these the proper bases for distinguishing between the two? Does not the term "operating" refer rather to the specific utilities which the owners conceive it to be their function to perform in contra-distinction to the phases which accompany operations more or less in the nature of side issues? Thus the ordinary manufacturing or merchandising business is organized to create form, place, time, ownership utilities, etc. Such, therefore, are the substance of the business operations per se. Income in the form of interest and dividends from temporary investments is therefore not income from the operations per se. And vice versa, while it may be argued that income and profits taxes are rather indefinite costs of the benefits received from the Federal or state governments, or that they are costs of the more or less democratic economic order in which the business earns its profits, and while it may be admitted that they are definitely a cost of the income which the owners are permitted to retain, it is subject to serious question, since they are usually assumed not to be shifted, whether they are a cost of the operations per se. Are they not a proprietary item or cost rather than an operational cost? Would not the Committee therefore be more consistent with economic reality and of greater service to both ownership and management if it accepted this latter, perhaps more accurate, interpretation of the term "operating" as the basis for

Postulates No. 10 and No. 11? Does not part of the Committee's difficulty result also from its desire to exhibit capital gains and losses, large or small, in the income statement in spite of their true economic relationship, and would it not be preferable to rely upon Postulate No. 20 for their more correct presentation? In spite of the fact that a portion of the regular operating expenses is frequently a cost of the non-operating income, it would seem that if the Committee insists upon its usage of the terms "operating" and "non-operating," that the least it can recommend is that the operating section of the income statement should be so set forth that the success or failure of the main functions performed would be indicated specifically, separate from the influence of the more or less incidentals.

The item "the amount of interest incurred on borrowed money, including debt discount and expense properly amortized during the year" is certainly a cost of proprietary income, a cost of trading on the equity, but whether it should be exhibited as an operating item has long been a question for debate. Since interest cost is usually incurred in order to obtain the services of certain specific fixed assets, and since prior to operations it is usually charged directly to the cost of the asset, it would appear to be logically consistent, wherever possible, to continue to charge interest to the account of the asset for the use of whose services the interest cost is being incurred as long as the interest is paid (assuming, of course, that the firm will cease paying interest quite some time before the end of the asset's life, an assumption which is not always correct). The interest would then be charged to expense through the medium of depreciation, thus being distributed over the whole of the remaining years of the asset's life, including those years extending beyond the retirement of the mortgage but for whose benefit the incurrence of the interest cost was an apparent necessity. While, to repeat, such procedure appears to be most logical, it may not be impractical on the basis of the theory of uniformities to treat the whole of the interest as an expense at the time that it is paid or accrued.

Further, while it may not be entirely illogical to charge interest payments to expense, it does appear objectionable to treat the more or less normally recurring dividend and interest receipts from investments as an operating income. On the theory that such receipts come from activities outside the scope of the utility service for which the business was organized, the treatment of such items as an aspect of the operations proper is scarcely subject to approval. Nor is it illogical to exhibit interest cost as an operating expense and interest income as a non-operating item. In fact, it may be argued even further that from the standpoint of the proposed third column in the income statement, and from the viewpoint of the owner, interest on proprietary investment is a true economic cost of operations and as such may be treated in the accounts as an operating expense.

By way of interjection, it may be well to ask the Committee at this point where it would exhibit losses resulting from pricing the inventory at "cost or market whichever is lower" (assuming that this method of pricing the inventory is permissible in spite of the question raised in connection with the discussion regarding Postulate No. 3)? Would the Committee exhibit such loss implicitly in the operating section of the income statement as an increase to the true cost of the goods sold or in the non-operating section as a capital loss?

The term "realized" as used in Postulate No. 9 is also one which the accountant may do well to drop from his vocabulary. While, strictly, it probably refers to that status in which the businessman finds himself when he has sold his goods and collected and pocketed his cash, the term "realized" is too often the basis for dispute. It is possible to go by easy stages from realization with cash collection, to practical realization with sale, to realization when a good, marketable security has increased in value, to appreciation in general, etc. Fundamentally what the accountant has in mind is that eco-

nomically income may exist in all of these cases and that it is just as real, at the moment, in one case as in another, but that because of uncertainty either regarding its amount or its continued existence, it is not practical to recognize it until it has been more or less definitely crystallized. Would it not be better, therefore, to substitute for the term "realized" certain practical rules for the recognition of income on the cost-sale basis?

The Committee is to be commended for its positive stand in placing "depreciation and other amortization of assets applicable" among the operating costs.

Lastly, from the viewpoint of the three-column statements previously mentioned, and from the viewpoint of creditors, prospective investors, management, etc., it may be practical to recognize income from market appreciation or losses resulting from market depreciation in the present-value column of the income statement, presenting both as non-operating items. Such procedure would provide a more valid basis for the owner's judgment of managerial efficiency. The various types of risks to which a business is subjected, the risks from undertaking to supply a utility per se, the risks resulting from changes in the value of the monetary unit, and the risks from true market depreciation (or appreciation) of capital assets, ought to be analyzed economically in the current-dollar-value and the present-value columns. It may, for instance, be of considerable importance to managerial decisions to know whether profits are increased or decreased because prices advance or decline and wages lag, or because the appreciation or market depreciation of capital assets are being turned into cash piecemeal through the ordinary sale process. In the managerial or present-value columns such facts should be included properly in the respective operating and non-operating sections; it would seem that such analyses would, in many cases, enhance the accountant's value to his firm.

Postulate No. 12 states that "The income account of a corporation should not include credits or charges resulting from profits or losses on transactions involving the issuance, purchase, or retirement of its own stock; from any adjustment of the capital accounts; or from dividend payments or stock dividend distributions." In spite of the fact that differences exist between treasury stock and unissued stock, namely, that there are no restrictions regarding the price at which treasury stock may be resold, that the preemptive right does not usually include treasury stock, and that therefore an argument may be supported which would lead to the conclusion that treasury stock is an asset differing only in nature from other assets, fundamental logic would seem to point in the direction of the conclusion that treasury stock is really an offset to net worth and that its resale constitutes a transaction similar in nature to the original sale. Postulate No. 13, therefore, appears to be reasonable both as respects treasury-stock transactions and other capital transactions.[21]

CAPITAL AND SURPLUS

Postulate No. 14 states that (only) "Two major divisions of the capital of a corporation should be recognized: paid-in capital and earned surplus. Subdivisions of each section should appear as may be appropriate." Postulate No. 15 defines the one major division as "Paid-in capital consists of amounts received for shares issued: capital stock, paid-in surplus, gains from the sale of reacquired shares and from the retirement of reacquired shares purchased at a discount, and transfers from earned surplus to capital-stock account by means of stock dividends, recapitalizations, or otherwise," and adds that "Reductions of paid-in capital accounts may arise from the redemption of outstanding shares, retirement of reacquired shares, or liquidating dividends." Postulate No. 18 states that the second major division "Earned surplus should be credited or charged only with the following:

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[21] Transactions involving treasury stock are considered in greater detail in connection with Postulate No. 15.

the balance of the income account, as periodically reported; distributions to stockholders; the excess of the cost over paid-in capital of shares purchased for redemption, or of reacquired shares retired; and reductions of surplus reserves, set aside for such purposes as the protection of working capital or the coverage of sinking funds. Earned surplus should include no credits from transactions in the company's own stock or transfers from paid-in capital or other capital account." The division of the capital of a corporation into two main divisions is certainly in keeping with logic and with practical requirements. The definition of the two major divisions however, may be subjected to one or two questions.

A very positive stand should be taken in favor of the inclusion of paid-in surplus in the paid-in capital division of the balance sheet. In fact, it is regrettable that the fundamental theory of no-par stock has not been more perfectly put into practice in exhibiting paid-in surplus as capital stock. The least that can be done, therefore, is to present the balance sheet in such a manner that all of the paid-in capital is exhibited under a classification headed "Paid-in Capital." In no case should paid-in capital be included under a general surplus heading.

In connection with "gains from the retirement of reacquired shares purchased at a discount" there is serious question whether the use of the term "gain" is correct. From the standpoint of the remaining stockholders such a transaction represents a definite gain since it actually increases their capital; from their viewpoint it may even be considered an earned surplus item subject to dividend charges. From the viewpoint of the corporation, however, it represents a saving, not a gain. The corporation's net worth is not increased but merely readjusted. It would seem, therefore, that the term "savings" is preferable.

There is a further question regarding the "gains from the sale of reacquired shares." Since the excess of the price at which the treasury stock is sold is to be credited to paid-in surplus, it appears that the Committee, in reality, conceives of such transactions as original transactions between the new stockholders and the corporation, or as an original investment. In which case, the concept "gain" does not fit into the picture any more appropriately than when there is a real original issue of stock, or when a second block of stock is issued at a price greater than a first block. Presumably, it is the concept "gain" which is responsible for crediting such excess amounts to earned surplus. There can, however, be no gain from an original investment. It is true that from the standpoint of the remaining stockholders, gain exists since they participate pro rata in the excess amount contributed by the new stockholders. But from the standpoint of the corporation, interpreting the transaction, as the Committee apparently does, as an original transaction between the corporation and the stockholder, gain cannot exist.

However, is the Committee's interpretation of such treasury-stock transactions the correct one? Is the transaction an original transaction between the corporation and the stockholder? In all probability the corporation does not engage in such transactions with such an idea in mind. Most likely the corporation does not conceive of a treasury-stock transaction as decreasing or increasing its capital, rather it purchases its own stock with the intention of later re-selling it at an enhanced price and realizing a profit, a gain. To the corporation it is probably a transaction of the same nature as the purchase of the stock of any other corporation, or the purchase of any other asset as a temporary investment. Further, it is probable that the new stockholder does not conceive the purchase of re-sold treasury stock as an original transaction between himself and the corporation. In most cases he probably purchases the stock on the market and is wholly unaware of the identity of the seller. He conceives of himself not as making an investment in the corporation (a fact which is probably true of most purchases of stock on the market and which is possibly responsible for much of the lack of interest exhibited by stockholders) but as making an investment in property which will probably bring him a reasonable return

and which will likely increase in value. As indicated earlier, the prohibition respecting the sale of stock at a discount is not applicable to treasury stock nor does the preemptive right include treasury stock. In the third place, if the Committee is convinced that the sale of treasury stock partakes of the nature of an original transaction and hence is not subject to gain, further question may be raised as to whether the same line of reasoning would not demand that an amount equal to the difference between par value and the price paid for the treasury stock at the time of purchase should not, upon the resale of the treasury stock, be transferred from earned surplus to paid-in surplus.[22] In other words, is not the total amount received from the resale of the treasury stock capital, and is not the total of the amount above par, and not only the excess over the purchase price, paid-in surplus? Certainly, the portion of the purchase price in excess of the amount paid in by the original stockholder (or the amount transferred to capital by way of stock dividends, etc.) represents a distribution of earnings. If the corporation distributes this portion of its earnings, then no portion of the receipts from the resale of the treasury stock can be earnings. But if the corporation credits the whole of the amount received from the sale of the treasury stock to capital stock and paid-in surplus, will not transactions in treasury stock constitute a disadvantage to the remaining stockholders? Will not the effect be much the same as that of a stock dividend and will not the remaining stockholders' expectations as regards future cash dividends be reduced while their claim in capital will be increased?

In view of such considerations the question may be left with the Committee whether consistency would not require that they eliminate the term "gain" from Postulate No. 15 and the term "profits" in Postulate No. 12 and also that they credit the whole of the amount received from the sale of treasury stock to the capital accounts, or whether, if the Committee wishes to retain the terms "gain" and "profits," the excess ought not be credited to earned surplus. It will be noted that the Committee avoids the real "innards" of this problem by recommending that treasury stock be carried as "an unallocated reduction of capital and surplus."[23] The problem becomes obvious when the purchase of treasury stock is recorded in terms of its component parts. Is it really true as Postulate No. 18 states that "Earned surplus should contain no credits from transactions in the company's own stock . . . "?

Another interesting question arises in connection with the latter part of Postulate No. 15. The Committee states that "Reductions in paid-in capital may arise (only) from the redemption of outstanding shares, retirement of reacquired shares, or liquidating dividends."[24] However, may not the paid-in capital also be reduced by deficits in the early years of the corporation's life prior to its having an opportunity to build up an earned surplus? Is it not true that from the standpoint of the later fiscal periods any success which is attained is due to the capital with which each fiscal year begins, or the paid-in capital minus the early deficits? Should the early deficit therefore not be maintained permanently as a contra item to paid-in capital? If, on the other hand, it is argued that the early deficits are a cost of establishing the business, or of the earnings to be secured later in the corporation's life, then are they not assets, a part of the "going-concern" cost? If the early deficits are charged to later surpluses the effect is somewhat the same as that of a stock dividend, the difference being that the stock dividend increases the paid-in capital while the charging of deficits to later surpluses replaces portions of paid-in capital which

[22] Postulate No. 18 states that "Earned surplus should include no credits from transactions in the company's own stock. . . . " If the transfer mentioned is not made, earned surplus will include, implicitly, a credit from a transaction in the company's own stock. Postulates No. 15, No. 16, and No. 18 are therefore not entirely consistent.

[23] See Postulate No. 16.

[24] The word "only" is supplied by the writer. In consideration of Postulate No. 19 it appears to be added improperly. Postulate No. 19 appears to enlarge the scope of Postulate No. 15.

were dissipated earlier. But why should these dissipated portions be replaced? Is not the success of a corporation better judged when they are not replaced?

A second question may be raised regarding the treatment of preferred-stock dividends, especially where they are cumulative. Are there no conditions when it would be justifiable to charge preferred-stock dividends against paid-in surplus?

Further objections may be raised against Postulate No. 18 because of the Committee's use of the terms "set aside." Do not the terms "set aside" usually refer to a physical setting aside? Are they not therefore better used in relation to assets? And do not their use in connection with surplus contribute to the confusion which exists in respect to surplus wherein this latter is conceived of not as an equity, an element of net worth, but rather as consisting of cash or assets? Whether these questions are proper or not, it appears that other terms would be preferable for the process of "reserving" the assets representative of earnings in the business.

Postulate No. 16 states that "The cost of reacquired shares of capital stock should, if the shares are reissuable, be regarded as an unallocated reduction of capital and surplus rather than as an asset; if the shares are not reissuable, or if they acquire the status of unissued or retired shares, such cost should be charged to capital-stock account up to the amount by which capital has been formally reduced; any balance remaining should be charged to paid-in surplus up to an amount not in excess of the pro rata portion of paid-in surplus applicable to the shares; any part of the cost which cannot be thus absorbed should be charged to earned surplus" and is consistent with the preceding postulates. The status of treasury stock has never been settled. The issues raised in connection with the discussion of Postulate No. 15 indicate some of the reasons why that should be the case. In addition it should be noted that treasury stock differs from unissued stock in that the former has a cost, and that on this basis it may be concluded to be an asset. Further, the fact that a corporation may pledge its own unissued bonds, or its own treasury bonds, as collateral in times of emergency[25] is support for the conclusion that the reason treasury stock is not usually considered to be good collateral for loans may be due as much to a question regarding the stability of its worth as to doubt regarding its status as an asset. While numerous accountants and lawyers may therefore object to the treatment which the Committee recommends for treasury stock, it would seem that it has much in the way of logic in its favor and that Postulate No. 16 should be subject to general acceptance.

Postulate No. 17 states that "Neither paid-in surplus nor surplus reserves should be availed of for the absorption of losses. Charges for all cost amortization, losses recognized, and other asset values expired should be by way of the income account to earned surplus." Such a rule may lead to the somewhat contradictory situation of earmarking reserves to bear the burden of specific future losses only to have the reserves unavailable when the losses occur. Presumably the Committee would recommend that at the time the losses occur, the reserve should be returned to surplus in equivalent amount. In which case, except for the informational effect, the loss is charged against the reserve indirectly. Logically, it would seem that Postulate No. 17 should lead to a change in reserve procedure and to a change in reserve titles. Reserves for contingencies would hardly be proper, at least, as ordinarily conceived. As per previous discussion regarding capital losses, the logic of Postulate No. 17 is questionable.

Postulate No. 19 that "Where by proper corporate action a deficit has been absorbed through a reduction of par or stated value of capital stock or by transfer to paid-in surplus, earned surplus thereafter should be so labeled as to indicate that it dates from a point of time subsequent to the inception of the corporation" is, in a sense, in so far as it permits a reduction of the paid-in capital accounts through the absorption of deficits upon proper corporate action, presumably

[25] See Burtchett, F. F., *Corporation Finance*, p. 673.

upon motion of the board of directors, an extension of the scope of the reductions allowed by Postulate No. 15. It appears to be more logical, however, than the limitations of Postulate No. 15. It is well, in any case, that the date of the origin of the surplus be stated specifically.

Postulate No. 20 states that "Periodic reports should include analyses of capital stock and surplus accounts in sufficient detail to disclose the nature of the changes taking place during the accounting period, including increases and decreases in paid-in capital from sales or purchases of shares." The Committee might well add "and increases to paid-in capital from stock dividends, properly dated, in order that a reader of the statements might be enabled to distinguish the capital amounts contributed by stockholders from those amounts which are provided out of the earnings of the corporation." Postulate No. 20 is eminently reasonable and should be subject to no objection from those who desire to be honest in their relationships with the investing public.

CONCLUSION

While certain of the postulates in the "Tentative Statement" have been subjected to criticism on the basis of their failure to incorporate provisions which would enable the accountant to meet the demands of the economic world in a more realistic manner, the Committee's work represents a very commendable attempt to establish an accountant's creed leading to greater uniformity of procedure. Basically the postulates set forth a plan which is highly desirable. In fact, without some such fundamental approach to the problem, some such fundamental uniformity, accounting is not justly to be entitled a profession. It is to be hoped, however, that the Committee will go further than it has gone and develop postulates capable of enabling the accountant to be of greater service to management, prospective investors, and the general social body, and that it will thus fulfill in broader measure the dual duty implied in the term "accounting."

[Following are brief comments on the "principles" by Arthur N. Lorig of the University of Washington, and Charles T. Sweeney, a certified public accountant practicing in Springfield, Ohio.]

Arthur N. Lorig

In regard to the Accounting Principles Affecting Corporate Reports, I venture to offer the following suggestions—in protest against a number of the principles which are in some respects so restrictive as to do probable harm. They seem to be an attempt to check a certain recent progressive tendency in accounting and to force accountants back to the old conservatism for conservatism's sake.

The principles objected to are those dealing with costs and values. They aim to tell investors and creditors of values which were purchased and have not disappeared, but studiously avoid giving information as to new values which may have developed. They make of conservatism a god so domineering that the objective of accounting—providing useful financial information for intelligent guidance—is somewhat forgotten.

The fault may be traced to the basic assumption upon which the principles are founded—particularly that portion of the assumption giving the purpose of financial statements. Instead of being "the expression, in financial terms, of [only] the utilization of the economic resources of the enterprise . . ." the purpose should clearly be to show *all* important changes in the resources, including those not arising through utilization. To show properly "changes in and position of the interests of creditors and investors," account must be taken of losses in value other than through utilization and also of exceptional increases in value.

Fortunately, the principles do not adhere strictly to the basic assumption, for they do take cognizance of decreases in value other than through use. They do not, however, permit recognition of important increases. And therein lies the fault—disregarding (in

effect, concealing) a significant kind of information. This point will be made clearer in the following discussion of some of the specific principles.

Principle No. 1 is rather vague. Valuation, it states, "involves [includes?] writing down physical assets to reflect diminished usefulness." Is it meant to confine it to that alone? The principle does not mention the possibility of writing up the assets to reflect increased usefulness, but it may be assumed from the basic assumption and from the other principles that this is not to be permitted. If some assets increased in value and others decreased in value, presumably the decreases will be recognized but not the increases. In other words, the accountant should try to prevent assets from being overvalued but be indifferent to undervaluation. Thus, hidden values (secret reserves) are knowingly permitted—even brought about—by the accountant—the creditor and investor being kept in ignorance or forced to guess at what they might be. Principle No.7 weakly gives permission to mention the "values other than unamortized costs" as collateral notations, but does not require that this useful information be disclosed.

The use of the word "original" in connection with "cost" in this principle seems to exclude adjustments in value because of exceptional repairs, replacement of parts, or even additions. This, it would seem, is not intended.

The "substantial change in beneficial ownership" commented upon in Principle No. 2 is vague in meaning. Does it mean "when assets are purchased?" And if the "fair market value" is considerably less than the amount for which the securities might have been sold at that time (it has happened in the past) that fair market value cannot properly be called "cost."

Principle No. 3 recognizes that "diminutions or expirations of cost" are likely to be estimates rather than precise measurements. Yet they must be taken into account. The same estimating procedure could also be used to determine and show *increases* in value, but this possibility is disregarded.

Principle No. 4 seems to be unduly restrictive also. Instead of requiring revised income statements—absolutely impossible in most cases where statements are published—why not permit the adjustment to be placed in the current statements as an extraordinary credit? Principles 9 and 11 provide for that possibility.

In principle No. 5, we again find emphasis given to adjusting values so as not to transmit any lost value to succeeding periods, while increased values are disregarded.

Principle No. 6 apparently refers to notes with a single interest payment at maturity. It certainly does not cover a case where the obligation is a bond with periodic interest payments, sold at a discount or a premium and possibly with the payment of a commission. The principle should either be elaborated to cover such funded obligations or the term obligation changed to single payment note.

Principle No. 7 has been commented upon. It would seem that the accountant should be *obligated* to quote other values when they vary from cost by a significant amount. Presumably he will discover such values while determining if cost be higher than present values.

In defense of the principles, the statement was made that "occasional uncoordinated 'appraisals' produce in the average financial statement a hodgepodge of unrelated values of no explicable significance to the ordinary investor, if indeed they have any to the managements of the enterprises affected." This seems to be more properly descriptive of costs—incurred at different times under varying price levels and purchasing policies and subjected to advance (and therefore often inaccurate) estimates of depreciation. An "appraisal" at least attempts to use one (the current) price level and purchasing policy and can take account of the depreciation actually evident. It should therefore result in more closely related and accurate values than costs.

It almost seems as though the discussion accompanying the principles attaches inherent, unexplainable import to cost. What merit is there in using cost if it is no longer truly representative of the values in the

business? Are the costs incurred over a period of years under changing economic conditions really "consistent" and "certain" as stated in the discussion?

In the "measurement of income," it seems that a somewhat broader viewpoint has been adopted. Were any increased values to be recognized in the accounts, then principles 8 and 9 would need to be changed slightly to have the income statement reflect not only costs but all other values written off during the period. The other principles can be interpreted to cover the situation properly. However, if increased values are recognized on the balance sheet and allowed to increase the charges to expense, it would be desirable to call attention to the need of showing realized appreciation in the non-operating section of the income statement.

Two criticisms might be made of the principles covering capital and surplus. The term "paid-in capital" seems quite inappropriate to the composite described in principle No. 15. Not only are some of the additions not paid in, but the reductions sometimes made to wipe out deficits might change the amount to below what was actually paid in, The term is distinctly misleading. And is the distinction advantageous? It seems to the writer more illuminating to maintain the old three-class distinction of capital stock, capital surplus and earned surplus.

The suggestion made in Principle No. 19 that, if a deficit is absorbed in "paid-in capital," earned surplus be labeled as dating from that time seems of little importance if dividends have been subsequently paid. Perhaps it is intended that the date be carried only until such time as dividends change the amount.

. . . . . .

In the foregoing discussion, it is not intended to imply that the increased values in a business must be used in place of costs. It is possible by various methods to show both costs and increased values in the accounts —both types of information being useful. Or the increased values may be given only in notation form on the statement.

Furthermore, frequent detailed appraisals of assets are not necessary. The accountant, in verifying values, will often encounter evidences of increased values, sometimes in actual figures, which it should be his duty to disclose. But if the management does have an acceptable appraisal made, the accountant should welcome the opportunity to use the figures in providing financial information.

In making this type of critical analysis, there is a tendency to emphasize needed changes and allow good features to go unmentioned. Actually, the task undertaken is a very worth while one and the work done so far deserving of much commendation.

Charles T. Sweeney

The controversy between Messrs. Banks, Carmen, Montgomery, and others, concerning the balance sheet position of debt discount which has been raging in the *Journal of Accountancy* during recent months seems to have spread to the Accounting Review for in the September issue appears an article by Professor Wm. A. Paton in support of one side of the controversy. This article is quite unlike Paton's calm dispassionate style which seems to examine a problem, or a statement, from every angle before arriving at a conclusion soundly based on logic alone. Is the New Deal method of meeting criticism so pervasive that dislodging an opponent by indirection and assumption rather than by logic is an accepted method?

It is my understanding that the purpose of the Asssciation in stating the "Tentative Principles" was to provoke discussion concerning many accounting problems to the end that soon a body of accounting principles may emerge to guide all of us in treating similar situations in similar fashion, and correctly. It is with this idea in mind that I am making this attempt to further the discussion concerning "Tentative Principle No. 6."

In all of this discussion concerning the balance sheet appearance of debt discount there seems to be no doubt as to what unamortized—unaccumulated to Professor Paton; unaccrued to the Executive Com-

mittee—debt discount is either at the time a debt is incurred, or at any later date. Neither does there seem to be any procedural question as to amortization. This, presumably, leaves as the sole matter under discussion—outside of personalities—the balance sheet position of debt discount, i.e., whether the unamortized portion of debt discount, no matter how it is determined, is a liability valuation item or not. Certainly the proponents to date, have supported their side with the larger number of arguments and examples. They also have injected the least common words into the discussion. Just what do "etiolated" and "homoosusian" mean anyhow? These words are evidence of a pretty fine dictionary but not necessarily of conclusive argument.

To me the entire "principle" is insufficiently and poorly phrased. A principle not only ought to be conclusive but it ought also to be exclusive and inclusive. It ought to deal completely. Except by implication, and algebraic deduction, it does not completely deal with debt valuation. It seems to leave outside the realm of this particular "principle" the question of debt premium. Can it be possible that debt premium is covered by "principle No. 7"? Or is it to be understood that the present practice with respect to debt premium is an acceptable one? Even so may not debt discount and debt premium be considered aspects of the same thing, i.e., adjustments of future interest payments? If both of these exist because in given situations coupon rates of interest differ from market rates, can one be considered as a valuation of a liability but not the other? Ought not a statement, if it is to have the standing of a principle, indicate fundamental relationships rather clearly, completely, and consistently? It seems to me that "principle No. 6" may form a basis of discussion but that in its present form it is unworthy of adoption. It will not be worthy of executive approval of any of our formal accounting bodies until it is less ambiguous, and until it embraces acceptable and consistent treatment for both debt discount and debt premium.

The definition of the term liability as given by the National Committee on Municipal Accounting is as follows: "debts or other legal obligations arising out of transactions of the past, which must be liquidated or renewed or refunded upon some future date." It is to be noted that the debts are legal ones. Is it too far fetched to assume from this definition that the debts to be reported are legally enforceable claims—not necessarily in legal process, of course—and at the amount which presumably a debtor can currently assert if called upon to do so? One of the proponents of "principle No. 6" has stated his belief that in case of a debt issued at a discount a court in liquidation proceedings would in assaying the claims of this debt issue give considerable regard to the proceeds of the issue on the ground that it would be equitable. Would he go farther and assert that the existence of a debt premium entitles, on equitable grounds, the holders of the bond issue to receive consideration on the basis of the face of their claims plus the premium? If so, would the additional claim be based upon the premium at the time of issue, or upon some arbitrary reduction in this figure despite the fact that the bondholder knew he was purchasing a claim in a certain face amount, and would never be entitled to urge a claim in any greater amount? If it is urged that a debt discount is a negative liability can it not also be urged that a debt premium is a positive liability? Certainly it is difficult to regard a debt premium as a liability under the above definition of liability. Is it not just as difficult to regard a debt discount as a reduction of a liability under the above definition? Do we need definitions for two types of liabilities, one perhaps for effective liabilities and the other for ineffective liabilities?

If we are to define debt discount as interest payable at the maturity of a debt, as is stated in the "principle," can we also define debt premium as interest not payable at the maturity of a debt? These two items are opposite aspects of the same thing. Can we accept the simple statement of the "principle" that debt discount is interest payable and rest on that premise? Can we define debt discount as other than the amount by which the face of an obligation exceeds the proceeds of an obligation, and which amount

represents an adjustment of interest expense during the life of the debt? If not then we can define debt premium as the amount by which the proceeds of an obligation exceed the face of the obligation, and which amount represents an adjustment of interest expense during the life of the debt. These definitions are inconsistent with neither the nature of debt discount and debt premium nor each other. If the proposed practice with respect to debt discount is to be accepted must we not accept a different set of definitions, and ones which would run something like this: debt discount is the amount by which the face of an obligation exceeds the proceeds of the obligation, and which amount represents interest on the obligation payable at maturity; debt premium is the amount by which the proceeds of an obligation exceed the face of the obligation, and which amount represents interest on the obligation not payable at maturity. These latter definitions are consistent but not very enlightening as to the exact nature of the items, and certainly, in the case of debt premium, it might be assumed that a part of the interest is received from the debtor. The common characteristic of the definitions given first is that the difference between the face and the proceeds of an obligation is always an adjustment of interest expense. Amortization will cause a debit adjustment in one case and a credit adjustment in the other. The nature of these items, it seems to me, is emphasized by the way we use them. Since neither debt premium nor debt discount is ever defined with reference to assets or liabilities—either negative or positive—can it be possible that they appear on a balance sheet solely because of their connection with profit and loss procedures, our dislike to consider them as realized losses or gains, and because they do indicate something with respect to an important financial transaction? Would it be too far fetched to hazard an opinion, in line with the above reasoning, that the appearance of debt discount and debt premium on the balance sheet is to more fully portray a past financial condition, have little or nothing to do with present assets and liabilities, are really a part of net worth, and ought to appear in the net worth section of the balance sheet? It has been stated that debt discount is not a loss at the time of debt issue. May it not be that discount and premium represent contingent loss and gain which it is preferred not to recognize so long as the essential facts may be presented on a balance sheet so that anyone can draw his own conclusion. Surely a loss has been suffered by prior stockholders whose claims are evidenced by stock validly carried at par and with some additional equity in surplus when later stockholders are permitted to gain equal rights at less than the book value of the prior ownership rights. Would not the same thing be true for ownership when an enterprise incurrs an indebtedness under conditions which permits the debtor to secure definite claims in excess of his contribution to the enterprise?

If the independent public accountant is to be considered as a quasi public official, and he must be, it seems to me, if he is to regard himself as a member of a profession rather than as a business, he must give considerable regard to the public to which he is indirectly reporting. Valid criticisms of reporting practices are, it seems to me, that they conceal information, fail to disclose information, or are misleading in important particulars. Obviously it is impossible to disclose on a balance sheet all the details of the accounts, and also obviously it is impossible to place on a given balance sheet each item in juxtaposition to every other item with which it might be used in a detailed and critical analysis for every possible purpose. Both the present and the proposed practice of handling debt discount would use exactly the same items in reporting. The criticism of the present practice, then, must be that it is misleading.

It will be generally conceded, I think, that the present practice of including debt discount under the caption of asset is wrong. If the present practice is to be continued Mr. Montgomery's suggestion of a better caption for the debit side of the balance sheet is in order. The clear implication of the "principle," however, is that the only correct position for debt discount is as a reduction of a liability. This treatment may possibly be correct when the debt discount constitutes

the entire interest charge. It is not by any means clear that this is the proper treatment when debt discount constitutes only a part of the interest charges. An example cited by both Mr. Carmen and Mr. Paton in support of the proposed practice is that of "baby bonds." The government in this case definitely states that its liability with respect to any bonds sold is so much this year, so much next year, and so on. The effective interest rate cited by the above gentlemen is based on an issue price and a final redemption value. Reference to the schedule of redemption values will disclose that these values are arbitrary, not too closely tied up with the cited effective interest rate, and furthermore that this schedule is a part of the original contract. No such schedule of redemption values exists with respect to the ordinary debt transactions being discussed. The ordinary indenture provides that periodic payments called interest will be made, and that upon maturity of an issue a further payment will be made at which time the evidence of the debt must be given up. It also provides that maturity may be hastened by certain events which it enumerates but that if these should happen no future interest payments will be made after the surrender of the evidence of indebtedness, and that the basic claim is the same in amount regardless of near or remote maturity. Nowhere will be found any evidence that the periodic payments are anything but contingent upon the evidence of indebtedness—the bond—being outstanding. There is no justification for the statement that the ultimate liability for a debt issue includes possible interest payments. These are to be paid only so long as certain conditions prevail. There is nothing in the ordinary indenture which makes the amount which a debtor is to receive upon surrender of the evidence of his claim less than its face amount. Maturity may be as distant as originally planned, or it may come soon after the issue becomes outstanding, but the amount to be received in payment at maturity is the face of the obligation. No supposition of going concern can intervene to change the original agreement. It may be conceded, I think, that when obligations are issued at a discount that not only is there no intention but also no necessity to meet the face of the obligation from the assets currently within the enterprise. The expectation is to accumulate during the life of the debt enough additional through amortization to take care of the discount. This provides in effect an indirect charge to surplus rather than a direct one. None of this can alter the fact that ownership has permitted claims to arise ahead of itself and in definite amounts. There is no sound basis for reporting the liability to be other than the amount in which it exists. As public accountants can we assert that a claim against an enterprise is other than what is stated on a scrap of paper in the possession of the debtor, and which he received from the enterprise as evidence of his claim. Are we not as quasi public officials reporting for possible use by the public? Whatever flights of fancy we are permitted when we must estimate none is permitted, it seems to me, when we have a written document which definitely states the amount of a claim. However valuable the proposed treatment of bond discount may be in a certain type of analysis it would be incorrect to report liabilities on this basis even though the present practice is wrong.

Do you think that the Executive Committee would explain why when they assumed fatherhood of debt discount they denied paternity of debt premium?

In conclusion I would like to submit—perhaps "sire" is a better term—a method of reporting liabilities involving discount and premium which does violence to neither assets nor liabilities, is in line with accepted definitions, and provides as much information as either the present or proposed practice. This method would cause—for purposes of reporting only—debt discount and debt premium to be charged to surplus, and the liability to be reported as follows:

Unamortized Discount......	$ 50,000	
Effective Liability..........	950,000	
Bonds Outstanding.........		$1,000,000
Effective Liability..........	$1,050,000	
Unamortized Premium......	50,000	
Bonds Outstanding.........		$1,000,000

PROFESSIONAL EXAMINATIONS

A Department for Students of Accounting

HENRY T. CHAMBERLAIN

THE following problems, prepared by the Board of Examiners of the American Institute of Accountants, were used in the C.P.A. examinations of thirty-eight States and three Territories on November 18–19, 1937. These problems constitute the first half of the examination in accounting theory and practice and are reproduced by permission. Examinees were required to solve problem 1; problem 2 or 3; problem 4; and problem 5 or 6. The problems were weighted as follows: problem 1, 40 points; 2 and 3, 30 points each; 4, 20 points; 5 and 6, 10 points each.

In the preparation of the solutions which follow the problems, the total time allotted has been kept in mind, in the hope that those who find this material of interest will gain some idea of the form and content of papers that may reasonably be expected under examination-room conditions.

Other selections from the Institute examinations and from the examinations held elsewhere will be presented in future issues of the REVIEW.

Problem 1:

On December 1, 1936, the Amity Finance Corporation entered into a factoring agreement for the extension of advances or loans to the White Paper Company, to be secured by a general mortgage on paper, pulp and pulpwood inventories, with the exception of pulpwood while in course of woodland operations, such inventories to be marketed in the form of manufactured paper in the regular course of business. The agreement also provided that all sales accounts were to be assigned and transferred to the factor corporation subject to its approval of the credit risk involved; accounts not approved to remain the risk of the borrowing company. Discounts allowed to customers in excess of 1% were to be borne by factor in respect of approved accounts and by the borrower in respect of unapproved accounts.

On January 15, 1937, the factoring corporation rendered the following statement of its account with the borrowing company, for the month of December, 1936:

1936				
December	1	Advances on this date	$250,000	
		Credit for accounts transferred:		
		Credit risks approved		$350,000
		Credit risks not approved		40,000
		Factoring commission @ 1% of approved accounts transferred	3,500	
		Discount provision @ 1% of all accounts transferred	3,900	
December	15	Advances on this date	400,000	
	31	Credit for December sales accounts transferred:		
		Credit risks approved		100,000
		Credit risks not approved		25,000
		Factoring commission @ 1% of approved December sales	1,000	
		Discount provision @ 1% on all December sales	1,250	
		Credit for cash remitted on account of doubtful sales accounts which had not been assumed		5,000
December	31	Excess discounts on risks not approved	300	
		Interest on advances, to date	2,250	
		Balance		142,200
			$662,200	$662,200

The White Paper Company continued its control of the customers' accounts and remitted all collections to the factor corporation as indicated by the following analysis of the latter's account to December 31, 1936:

December	1	Advances		$250,000
	15	Advances		400,000
	31	Customers' collections remitted to factor:		
		Approved risks (less discounts @ 1½%)	$246,250	
		Risks not approved (less discounts @ 2%)	29,400	
		Doubtful accounts—not transferred	5,000	
		Discounts allowed to customers	4,350	
	31	Balance	365,000	
			$650,000	$650,000

The following is a trial balance of the accounts of the White Paper Company as at December 31, 1936, reflecting the foregoing balance of $365,000 due to the Amity Finance Corporation and showing the position of the outstanding customers' balances at that date:

	Debits	*Credits*
Cash	$ 50,000	
Trade accounts receivable:		
Assigned to Amity Finance Corporation		
Approved accounts	200,000	
Accounts not approved	35,000	
Other (slow accounts)	15,000	
Inventories—pulp and paper	265,000	
pulpwood at mill	75,000	
logging in progress—woodland operation	95,000	
Mill supplies	80,000	
Cash in closed bank (estimated amount receivable)	3,500	
Land, buildings, plant	2,000,000	
Timberlands	1,350,000	
Plant additions in progress	16,000	
Logging and miscellaneous equipment—net	22,000	
Bond discount and expense	27,000	
Deferred charges—woods operations	13,600	
Unexpired insurance	4,300	
Other deferred charges	2,900	
Notes payable—banks (secured by logging in progress)		$ 47,500
Notes payable—other		16,000
Accounts payable—trade		157,500
Taxes payable—property, stumpage, etc.		23,000
Amity Finance Corporation		365,000
Accrued payrolls		7,000
Accrued bond interest (due November 1, 1936)		30,000
6% First Mortgage Bonds (due November 1, 1947)		1,000,000
Reserve for depreciation—buildings, plant		730,000
Reserve for depletion of timberlands		270,000
Common capital stock 5,000 shares—par 100		500,000
Capital surplus—arising from appreciation of properties		900,000
Earned surplus		208,300
	$4,254,300	$4,254,300

Prepare a balance-sheet of the White Paper Company as at December 31, 1936, after adjusting the account of the Amity Finance Corporation to conform with the statement received from that company, and after setting up reserves for doubtful customers' accounts at the rate of 10% of accounts not approved by the factor corporation and 30% of the slow accounts.

Problem 2:

Following is a trial balance of the general

ledger of the A B C Manufacturing Company (a co-partnership) at the close of business May 31, 1937, on which date a change in the partnership is contemplated.

A B C MANUFACTURING COMPANY
Trial Balance, May 31, 1937

	Debit	*Credit*
Cash	$ 22,830	
Accounts receivable	19,135	
Notes receivable	5,400	
Merchandise	52,050	
Machinery and equipment	34,200	
Delivery equipment	3,000	
Drawing account, A	6,000	
Drawing account, B	6,000	
Drawing account, C	6,000	
Life-insurance premiums	18,000	
Reserve for depreciation		$ 27,000
Reserve for doubtful accounts		3,400
Accounts payable		12,750
Expenses payable		975
Capital account, A		62,710
Capital account, B		62,710
Capital account, C		15,000
Sales		235,000
Cash discounts on purchases		980
Recoveries of accounts receivable written off		140
Cash discounts on sales	1,050	
Purchases	65,000	
Factory labor	137,500	
Factory expenses	11,500	
Selling expenses	21,850	
General expenses	11,150	
Total	$420,665	$420,665

The balance in the life-insurance-premiums account represents premiums of $6,000 each paid on three policies, one each on the lives of A, B, and C, respectively. Of this amount $900 was paid during the five months ended May 31, 1937, representing $300 on each of the policies.

Premiums on the policies on the lives of A and B were paid by the firm as a convenience to the partners and the firm as such has no equity in the policies. The policy on the life of C named the firm as beneficiary and the premiums on this policy were regarded as an expense of the business; this policy had a cash surrender value of $5,100 at May 31, 1937. By agreement the partnership turns over to C by transfer to his capital account the policy on his life for the cash surrender value and relinquishes all rights thereunder.

As a preliminary to the change it was agreed to liquidate the partnership. All accounts and expenses payable were to be paid, the partners' drawing accounts closed into their capital accounts and the life-insurance policies turned over to the respective partners in accordance with the aforestated facts.

The books have been kept on a calendar-year basis having been closed on December 31, 1936. No provision has been made in the accounts since that date for doubtful accounts or for depreciation. The policy of the firm has been to provide for doubtful accounts on the basis of ½% of sales; and to provide for depreciation at the rate of 10% per annum on machinery and equipment and 20% per annum on delivery equipment.

An inventory of raw materials, work in process and finished product was taken as of May 31, 1937, and found to be $63,250. An inventory of supplies taken at the same date comprised: factory supplies $2,050, selling supplies $100 and office supplies $50.

It was further agreed that the books should be closed and the profit or loss transferred to the respective partner's accounts;

the partnership agreement provides that profits or losses are to be shared equally.

The notes-receivable account represented a demand note of partner C in favor of the firm. C asked that this note be charged to his capital account and agreed to make good any debit in his capital account resulting from the liquidation.

A offered to purchase the assets and goodwill of the business for $92,000 as follows:

Accounts receivable less reserve	$14,000
Merchandise	50,000
Machinery and equipment	11,000
Delivery equipment	1,000
Supplies	1,000
Goodwill	15,000
Total	$92,000

He offered to make payment by application of the balance in his capital account to the purchase price, the remainder in promissory notes maturing monthly in equal amounts over a period of 15 months.

This offer was accepted; the cash and notes receivable, properly endorsed, were turned over to B and accepted by him in settlement of his capital account.

Required: (1) the journal entries necessary to give effect to the above transactions on the books of the co-partnership and to close these books; (2) the journal entries required to open the books of the sole tradership established by A to carry on the business, and (3) a work sheet on which the foregoing entries are applied to the above May 31, 1937, trial balance.

Problem 3:

From the following data prepare:

a. Consolidation working-sheet, showing eliminations and adjustments
b. Final consolidated balance-sheet
c. Schedule of dividends in arrears showing amounts applicable to minority interests.

The date on which A acquired capital stock of subsidiary companies was, in each case, the date on which the subsidiary company was organized.

A Company:	
Investment in B Company:	
Common stock 800 shs, 80 pct. int.	$ 80,000
Preferred stock 400 shs, 40 pct. int.	40,000
Investment in C Company:	
Common stock 600 shs, 60 pct. int.	60,000
Reserve against investment in C Company	59,999
Investment in D Company:	
Common stock 1,000 shs, ⅔ int.	100,000
Preferred stock 800 shs, 80 pct. int.	80,000
Investment in E Company:	
Common stock 1,900 shs, 95 pct. int.	190,000
2nd preferred stock 400 shs, 80 pct. int.	40,000
Account receivable, C Company	300,000
Other assets	69,999
Capital stock	500,000
Earned surplus	400,000
B Company:	
Assets	350,000
Preferred stock, 6 pct. noncumulative	100,000
Common stock	100,000
Earned surplus	150,000
C Company:	
Assets	420,000
Account payable A Company	300,000
Account payable, minority stockholders	200,000
Common stock	100,000
Deficit	180,000
D Company:	
Assets	244,000
Preferred stock, 6 pct. cumulative	100,000
Common stock	150,000
Deficit	6,000

E Company:

Assets	155,000
1st preferred stock, 6 pct. cumulative	100,000
2nd preferred stock, 6 pct. cumulative	50,000
Common stock	200,000
Deficit	195,000

All the subsidiary companies made a loss during the current year except B Company, which made a profit of $10,000.

Dividends have not been paid on preferred stocks outstanding as follows:

B—for 1 year
D—for 4½ years
E—1st preferred for 1½ years
—2nd preferred for 4 years

The preferred stocks of each subsidiary are callable upon 30 days' notice at $110 per share plus accrued dividends and are entitled upon liquidation to $100 per share plus accrued dividends.

Problem 4:

The following is a balance-sheet of the City of Croix at December 31, 1935:

Current Fund

Assets	
Cash	$ 15,482.34
Taxes receivable:	
Year 1932	1,917.66
Year 1933	7,308.14
Year 1934	8,133.11
Year 1935	123,170.65
Deferred charges:	
Overexpenditures of 1935 appropriations	437.10
Taxes cancelled—1935	850.00
	$157,299.00
Liabilities	
Tax revenue notes:	
Year 1933	$ 7,000.00
Year 1934	8,000.00
Year 1935	123,000.00
Accounts payable	17,601.00
Surplus revenue	1,698.00
	$157,299.00

Capital Fund

Assets	
Cash	$ 17,810.95
Improvements in progress	39,152.62
Deferred charges to future taxation for cost of completed improvements	25,380.00
	$ 82,343.57
Liabilities	
Serial bonds	$ 26,000.00
Notes payable	49,000.00
Accounts payable	7,343.57
	$ 82,343.57

The governing body of the City adopted the following budget for 1936:

Appropriations	
Department of Public Works	$ 275,450.00
Department of Revenue and Finance	48,500.00
Department of Public Safety	535,375.00
Department of Public Affairs	190,000.00
Department of Parks and Public Property	60,000.00
Interest on bonds	3,500.00
Retirement of bonds	7,000.00
Interest on notes	4,500.00

Overexpenditures of 1935 appropriations	437.10	
Taxes cancelled—1935	850.00	
		$1,125,612.10

Anticipated revenues		
General licenses	$ 10,700.00	
Liquor licenses	63,000.00	
Interest on taxes	22,000.00	
City clerks' fees	700.00	
Building permits	2,500.00	
Bureau of health fees	5,400.00	
Police court fines	3,000.00	
	$ 107,300.00	
Amount to be raised by taxation	1,018,312.10	
		$1,125,612.10

The actual amount of taxes levied for the year 1936 was $1,018,603.75.

During the year 1936, improvements in progress costing $30,000 were completed. The notes payable issued to finance the improvements were retired from the proceeds of a serial bond issue which was sold at par.

A statement of receipts and disbursements for the year 1936 follows:

Receipts:			
1932 taxes	$ 1,012.75		
1933 taxes	5,475.63		
1934 taxes	6,125.47		
1935 taxes	115,245.78		
1936 taxes	787,375.62		
General licenses	10,754.00		
Liquor licenses	63,125.00		
Interest on taxes	21,900.00		
City clerk's fees	725.00		
Building permits	2,530.00		
Bureau of health fees	5,350.00		
Police court fines	2,925.00		
Miscellaneous fees	250.00		
Tax revenue notes—1936	215,000.00		
		$1,237,794.25	
Serial bonds		30,000.00	
			$1,267,794.25

Disbursements:	
Department of Public Works	$ 270,680.00
Department of Revenue and Finance	47,350.00
Department of Public Safety	525,250.00
Department of Public Affairs	187,325.00
Department of Parks and Public Property	59,100.00
Interest on bonds	3,500.00
Retirement of bonds	7,000.00
Interest on notes	4,300.00
Tax revenue notes—1933	7,000.00
Tax revenue notes—1934	6,000.00
Tax revenue notes—1935	114,000.00
Accounts payable—current fund	16,751.00
	$1,248,256.00

Improvements in progress	$ 5,900.00		
Notes payable	30,000.00		
Accounts payable—capital fund	7,343.57		
		43,243.57	
			$1,291,499.57

The following bills applicable to the year 1936 were unpaid at December 31, 1936:

Department of Public Works	$ 4,000.00
Department of Revenue and Finance	1,000.00
Department of Public Safety	9,500.00
Department of Public Affairs	2,000.00
Department of Parks and Public Property	700.00

From the foregoing prepare a work sheet showing (1) the balance sheet at December 31, 1936, (2) the changes in revenue surplus, (3) journal entries and (4) cash transactions.

Problem 5:

The X Company is interested in acquiring certain patent rights owned by the Y Company and has made the following offer to the stockholders of the Y Company:

1. The X Company to pay $100 per share for an option to purchase all stock of the Y Company owned by any stockholder within one year from January 1, 1937.
2. The X Company to pay an additional $100 per share to the acceptors of the offer if the option to purchase such shares is exercised.
3. Assets of the Y Company on January 1, 1937, other than patent rights, will be liquidated and the proceeds paid to the old stockholders as their interest may appear. (Old stockholders are those persons who accept this offer, or those who own stock and refuse this offer.)
4. Dividends, other than liquidating dividends, paid during the term of the option shall be applied in reduction of the additional $100 to be paid if the option is exercised.
5. Acceptors of this offer shall deposit their stock holdings with a trustee. The trustee shall receive and hold all dividends applicable to the stock so deposited, except liquidating dividends, pending acceptance or other disposition of the option to purchase such stock.

Stockholders owning 18,000 shares (90%) of the capital stock of the Y Company accepted the above offer effective January 1, 1937, and were paid in cash.

To avoid future complications, the X Company purchased for cash the remaining outstanding shares @ $210 per share on January 15, 1937, and deposited these shares with the trustee.

The following dividends were paid during 1937:

	Liquidating	Other
May 30, 1937	$10 sh.	$20 sh.
October 15, 1937	9 sh.	10 sh.

The option was exercised on October 15, 1937, and the Y Company was completely liquidated; the X Company surrendered the capital stock in exchange for patent rights.

Prepare (1) journal entries to record the above transactions on the X Company's books and (2) a statement showing the cost to the X Company of the patent rights acquired.

Problem 6:

The Brown Company operates a mill, manufacturing a product X. During October and November, 1936, the mill, because of labor troubles, was forced to operate at reduced capacity.

The production and relative unit costs of

X for the six months ended December 31, 1936 were as follows:

	Production	
	Units	Unit Cost
July	20,000	$2.20
August	20,000	2.25
September	20,000	2.20
October	2,000	7.50
November	5,000	7.00
December	24,000	2.75

As a result of a labor settlement effective December 1st, the company agreed to pay all its workers a 10% increase in wages. Prior to that date labor cost represented approximately 70% of the total cost of the product. As an additional concession under the labor settlement the company granted a two-weeks' vacation to each employee; these vacations will be taken by the employees on a "staggered" plan, without the employment of any additional labor. No provision has been made in the company's records for this additional concession.

It was determined by the auditor that the expense of police, etc., during the labor difficulties had been properly charged to general expenses.

It is the practice of the company to price its inventory at cost prices established on average bases, predicated upon the production of December, and when the inventory is greater than the production of that month, then the prices are determined retroactively on the basis of the next previous month or months of normal production until a quantity has been obtained equal to the inventory on hand. The inventory of X at December 31, 1936 was 50,000 units.

At what prices should the company's inventory be valued? Show your computations.

SOLUTION TO PROBLEM 1

The points of this problem are the handling of the discount items and the construction of the balance sheet. There are only two adjustments of the trial-balance figures; but great care must be taken to set forth the borrower's financial condition.

The adjustments required are:

(1)

Earned surplus			$ 9,850.00	
Amity Finance Corporation				$ 9,850.00
To adjust the Amity Finance Corporation account to the balance shown on that company's books:				
(a) Adjustments of earned surplus:				
Factoring commission		$4,500.00		
Interest on advances		2,250.00		
1% discount on collections		2,800.00		
1% excess discount on risks not approved		300.00		
		$9,850.00		
(b) Additional credits to factor:				
Factoring commission		$4,500.00		
Interest on advances		2,250.00		
Discounts charged to factor on books	$4,350.00			
Amount that should have been charged (½% of $250,000)	1,250.00	3,100.00		
		$9,850.00		

(2)

Earned surplus	$18,000.00	
Reserve for doubtful assigned accounts		$ 3,500.00
Reserve for doubtful slow accounts		4,500.00
Accrued bond interest		10,000.00
To provide for losses on doubtful accounts and to accrue bond interest for November and December 1936		

WHITE PAPER COMPANY
BALANCE SHEET–DECEMBER 31, 1936

Assets

Current assets			
Cash		$ 50,000.00	
Trade accounts receivable:			
Assigned without recourse	$ 200,000.00		
Assigned with recourse	35,000.00		
Total assigned	$ 235,000.00		
Other	15,000.00		
Total receivables	$ 250,000.00		
Less reserve for doubtful accounts	8,000.00	242,000.00	
Inventories, at cost			
Mortgaged to Amity Finance Corporation:			
Pulp and paper	$ 265,000.00		
Pulpwood at mill	75,000.00		
	$ 340,000.00		
Mortgaged to bank:			
Logging in progress	95,000.00	435,000.00	
Prepaid expenses:			
Unexpired insurance	$ 4,300.00		
Mill supplies	80,000.00	84,300.00	$ 811,300.00
Other assets			
Deferred charges:			
Woods operations		$ 13,600.00	
Other		2,900.00	
		$ 16,500.00	
Cash in closed bank; estimated amount receivable		3,500.00	20,000.00
Fixed assets, at depreciated cost			
	Appraised value or cost	Reserves for depreciation or depletion	
Land, buildings, and plant	$2,000,000.00	$ 730,000.00	
Timberlands	1,350,000.00	270,000.00	
	$3,350,000.00	$1,000,000.00	
Less appreciation from revaluation of properties	900,000.00		
Cost	$2,450,000.00		
Plant additions in progress	16,000.00		
Miscellaneous equipment, net	22,000.00		
Totals	$2,488,000.00	$1,000,000.00	1,488,000.00
Total assets			$2,319,300.00

Liabilities

Current liabilities			
Advances from Amity Finance Corporation, secured by general mortgage on inventories other than logging in progress, and by the assignment of all accounts receivable		$ 374,850.00	
Notes payable to banks, secured by inventory of logging in progress		47,500.00	
Notes payable, other		16,000.00	
Accounts payable, trade		157,500.00	
Taxes payable		23,000.00	
Accrued payrolls		7,000.00	
Bond interest:			
Due November 1, 1936	$30,000.00		
Accrued	10,000.00	40,000.00	$ 665,850.00
6% first-mortgage bonds, in default on interest		$1,000,000.00	
Less unamortized bond discount and expense		27,000.00	973,000.00
Capital stock and surplus			
Capital stock, par value $100: authorized and outstanding, 5,000 shares		$ 500,000.00	
Earned surplus		180,450.00	680,450.00
Total liabilities			$2,319,300.00

COMMENTS

1. The effect of the first adjustment is to increase the liability to Amity Finance Corporation from $365,000 to $374,850, which is equal to the combined balances of the three accounts on the books of the factor.

2. Presumably the first 1% of all discounts allowed is to be the expense of the borrower. It may be assumed that the factor has taken up the additional ½% discount on the approved risks as its own expense, provided the assigned accounts on its books stand at $235,000 and the discount reserve at $2,350. No provision has been made for discounts on uncollected accounts; the problem does not indicate clearly that the discount allowed on collections is a cash discount. The assumption is made here that it *is* a cash discount and that no discount reserve has been provided on amounts not collected.

3. A number of other items are not clearly stated in the problem; these permit of varying treatments in accordance with whatever assumptions are made by the examinee:

(a) "Capital surplus" is a vague term having no single meaning; here it is assumed that it is not paid-in surplus created at the time the capital stock was issued, but was the result of a subsequent appraisal. On this assumption the item is in the nature of a valuation account and is so treated here.

(b) "Factor" is not used here in its ordinary commercial sense and it should have been defined in the problem.

(c) Credit losses on approved risks have not been provided for; the assumption may be made either (1) that no losses are expected, or (2) that the "factor" stands such losses.

SOLUTION TO PROBLEM 2

1—Adjusting and Closing Entries for A B C Partnership

1	Drawing Account—A	$ 6,000.00	
	Drawing Account—B	6,000.00	
	Cash Surrender Value of Life Insurance	5,100.00	
	Life Insurance Premiums		$ 17,100.00
	To charge Life Insurance Premiums paid to A's and B's drawing accounts and to set up the cash surrender value of C's policy.		
2-a	Capital Account—A	$ 12,000.00	
	Capital Account—B	12,000.00	
	Capital Account—C	6,000.00	
	Drawing Account—A		$ 12,000.00
	Drawing Account—B		12,000.00
	Drawing Account—C		6,000.00
	To charge the partners' capital accounts with their respective drawings.		
3	Bad Debts	$ 1,175.00	
	Reserve for Doubtful Accounts		$ 1,175.00
	To set up reserve for doubtful accounts at ½% of sales.		
4	Depreciation—Machinery and Equipment	$ 1,425.00	
	Depreciation—Delivery Equipment	250.00	
	Reserve for Depreciation		$ 1,675.00
	To charge depreciation on above assets for 5 months.		
5	Inventory—Raw Material, Work in Process, and Finished Goods	$ 63,250.00	
	Inventory of Supplies	2,200.00	
	Sales	235,000.00	
	Cash Discounts on Purchases	980.00	
	Recoveries of Accounts Receivable Written Off	140.00	
	Profit and Loss	2,280.00	
	Merchandise Inventory		$ 52,050.00
	Life Insurance Premiums		900.00
	Cash Discounts on Sales		1,050.00
	Purchases		65,000.00
	Factory Labor		137,500.00
	Factory Expenses		11,500.00
	Selling Expenses		21,850.00
	General Expenses		11,150.00
	Bad Debts		1,175.00
	Depreciation—Machinery and Equipment		1,425.00
	Depreciation—Delivery Equipment		250.00
	To close income and expense accounts and to set up closing inventories.		

2-b	Capital Account—A	$ 760.00	
	Capital Account—B	760.00	
	Capital Account—C	760.00	
	Profit and Loss		$ 2,280.00
	To close loss for period to capital accounts.		
2-c	Capital Account—C	$ 5,100.00	
	Cash Surrender Value of Life Insurance		$ 5,100.00
	To charge C for value of policy transferred to him.		
2-d	Goodwill	$ 15,000.00	
	Reserve for Depreciation	28,675.00	
	Reserve for Doubtful Accounts		$ 560.00
	Inventory—Raw Material, Work in Process and Finished Goods		13,250.00
	Machinery and Equipment		23,200.00
	Delivery Equipment		2,000.00
	Inventory of Supplies		1,200.00
	Capital Account—A		1,155.00
	Capital Account—B		1,155.00
	Capital Account—C		1,155.00
	To set up goodwill and to adjust asset values to sale price.		
6	Accounts Payable	$ 12,750.00	
	Expenses Payable	975.00	
	Cash		$ 13,725.00
	To record payment of accounts and expenses payable.		
2-e	Capital Account—C	$ 5,400.00	
	Notes Receivable		$ 5,400.00
	To write off C's note against his capital account.		
2-f	Cash	$ 1,105.00	
	Capital Account—C		$ 1,105.00
	To record cash payment by C to cover deficit in his capital account.		
2-g	Capital Account—B	$ 51,105.00	
	Cash		$ 10,210.00
	Notes Payable to B		40,895.00
	To record payments to B in dissolution of partnership.		
2-h	Capital Account—A	$ 51,105.00	
	Notes Payable to B	40,895.00	
	Reserve for Doubtful Accounts	5,135.00	
	Accounts Receivable		$ 19,135.00
	Merchandise		50,000.00
	Machinery and Equipment		11,000.00
	Delivery Equipment		1,000.00
	Supplies		1,000.00
	Goodwill		15,000.00
	To record withdrawal of assets and assumption of liability by A in dissolution of partnership.		

5400
4295
1105

2—Opening Books of Sole Proprietorship

Accounts Receivable	$ 19,135.00	
Merchandise	50,000.00	
Machinery and Equipment	11,000.00	
Delivery Equipment	1,000.00	
Supplies	1,000.00	
Goodwill	15,000.00	
Capital Account—A		$ 51,105.00
Notes Payable to B		40,895.00
Reserve for Doubtful Accounts		5,135.00
To set up the assets, liability, and reserve on A's books.		

A B C MANUFACTURING COMPANY

Work Sheet

May 31, 1937

	Partnership Trial Balance May 31, 1937		Partnership Adjusting and Closing Entries Debit	Partnership Adjusting and Closing Entries Credit	Sole Proprietorship Opening Entry Debit	Sole Proprietorship Opening Entry Credit
Cash	$ 22,830.00	$	(2-f)$ 1,105.00	(2-g)$ 10,210.00 (6) 13,725.00	$	$
Accounts Receivable	19,135.00			(2-h) 19,135.00	19,135.00	
Notes Receivable	5,400.00			(2-e) 5,400.00		
Merchandise	52,050.00			(5) 52,050.00		
Machinery and Equipment	34,200.00			(2-h) 11,000.00 (2-d) 23,200.00	11,000.00	
Delivery Equipment	3,000.00			(2-h) 1,000.00 (2-d) 2,000.00	1,000.00	

	Partnership Trial Balance May 31, 1937			Partnership Adjusting and Closing Entries Debit		Credit	Sole Proprietorship Opening Entry Debit	Credit
Drawing Account—A	6,000.00		(1)	6,000.00	(2-a)	12,000.00		
Drawing Account—B	6,000.00		(1)	6,000.00	(2-a)	12,000.00		
Drawing Account—C	6,000.00				(2-a)	6,000.00		
Life Insurance Premiums	18,000.00				(5)	900.00		
					(1)	17,100.00		
Reserve for Depreciation		27,000.00	(2-d)	28,675.00	(4)	1,675.00		
Reserve for Doubtful Accounts		3,400.00	(2-h)	5,135.00	(2-d)	580.00		
					(3)	1,175.00		5,135.00
Accounts Payable		12,750.00	(6)	12,750.00				
Expenses Payable		975.00	(6)	975.00				
Sales		235,000.00	(5)	235,000.00				
Cash Discounts on Purchases		980.00	(5)	980.00				
Recoveries of Accounts Receivable Written Off		140.00	(5)	140.00				
Cash Discounts on Sales	1,050.00				(5)	1,050.00		
Purchases	65,000.00				(5)	65,000.00		
Factory Labor	137,500.00				(5)	137,500.00		
Factory Expenses	11,500.00				(5)	11,500.00		
Selling Expenses	21,850.00				(5)	21,850.00		
General Expenses	11,150.00				(5)	11,150.00		
Capital Account—A		62,710.00	(2)	62,710.00				51,105.00
Capital Account—B		62,710.00	(2)	62,710.00				
Capital Account—C		15,000.00	(2)	15,000.00				
	$420,665.00	$420,665.00						
Cash Surrender Value of Life Insurance			(1)	5,100.00	(2-c)	5,100.00		
Bad Debts			(3)	1,175.00	(5)	1,175.00		
Depreciation—Machinery and Equipment			(4)	1,425.00	(5)	1,425.00		
Depreciation—Delivery Equipment			(4)	250.00	(5)	250.00		
Inventory of Raw Material, Work in Process, and Finished Goods			(5)	63,250.00	(2-h)	50,000.00	50,000.00	
					(2-d)	13,250.00		
Inventory of Supplies			(5)	2,200.00	(2-h)	1,000.00	1,000.00	
					(2-d)	1,200.00		
Profit and Loss			(5)	2,280.00	(2-b)	2,280.00		
Goodwill			(2-d)	15,000.00	(2-h)	15,000.00	15,000.00	
Notes Payable to B			(2-h)	40,895.00	(2-g)	40,895.00		40,895.00
				$568,755.00		$568,755.00	$97,135.00	$97,135.00

Key to Capital Account Entries on the Work Sheet:

		A, Capital	B, Capital	C, Capital
	Debits:			
2-a	Drawing accounts	$12,000.00	$12,000.00	$ 6,000.00
2-b	Loss from operations	760.00	760.00	760.00
2-c	Cash surrender value of life insurance			5,100.00
2-e	Note receivable			5,400.00
2-g	Cash and notes to B		51,105.00	
2-h	Net assets withdrawn by A	51,105.00		
	Total debits	$63,865.00	$63,865.00	$17,260.00
	Less—Credits			
2-d	Profit on sale of assets	$ 1,155.00	$ 1,155.00	$ 1,155.00
2-f	Cash paid in			1,105.00
	Total credits	$ 1,155.00	$ 1,155.00	$ 2,260.00
2	Debit balance as per work sheet	$62,710.00	$62,710.00	$15,000.00

This problem is an extremely simple one, involving no points beyond a first-year course in accounting, and requiring much needless copying.

SOLUTION TO PROBLEM 3

COMPANY A AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEET

Date

Assets

Other assets		$1,238,999.00
Total assets		$1,238,999.00

Liabilities

Minority stockholders' interest (schedule attached)		$ 463,000.00
Capital stock and surplus:		
Capital stock	$500,000.00	
Earned surplus	275,999.00	775,999.00
Total liabilities		$1,238,999.00

COMPANY A AND SUBSIDIARIES

CONSOLIDATION WORKING SHEET

Date

Assets	Company A	Company B	Company C	Company D	Company E	Adjustments and Eliminations Debit	Adjustments and Eliminations Credit	Consolidated Balance Sheet
Investment in B. Company:								
Common stock—80%	$ 80,000.00	$	$	$	$	$	$ 80,000.00	$
Preferred stock—40%	40,000.00						(1) 40,000.00	
Investment in C. Company—60%	60,000.00						(12) 60,000.00	
Investment in D. Company:								
Common stock—66⅔%	100,000.00						(6) 100,000.00	
Preferred stock—80%	80,000.00						(5) 80,000.00	
Investment in E. Company:								
Common stock—95%	190,000.00						(10) 190,000.00	
Second preferred stock—80%	40,000.00						(9) 40,000.00	
Accounts receivable—C. Company	300,000.00						(14) 300,000.00	
Other assets	69,999.00	350,000.00	420,000.00	244,000.00	155,000.00			1,238,999.00
	$959,999.00	$350,000.00	$420,000.00	$244,000.00	$155,000.00			$1,238,999.00
Liabilities								
Reserve for loss on investment Co. C.	$ 59,999.00	$	$	$	$	(13) 59,999.00		$
Accounts payable—A. Company			300,000.00			(14) 300,000.00		
Accounts payable—minority shareholders			200,000.00			(13) 32,000.00		168,000.00 M
Capital stock:								
Company A	500,000.00							500,000.00
Company B—6% preferred		100,000.00				(1) 40,000.00	(3) 3,600.00	63,600.00 M
Company B—common		100,000.00				(2) 80,000.00		20,000.00 M
Company C			100,000.00			(13) 40,000.00 (12) 60,000.00		
Company D—6% preferred				100,000.00		(5) 80,000.00	(4) 5,400.00	25,400.00 M
Company D—common				150,000.00		(6) 100,000.00		50,000.00 M
Company E—1st preferred—6%					100,000.00		(8) 9,000.00	109,000.00 M
Company E—2nd preferred—6%					50,000.00	(9) 40,000.00 (8) 800.00		9,200.00 M
Company E—common					200,000.00	(10) 190,000.00		10,000.00 M
Earned surplus:								
Company A	400,000.00					(7) 22,000.00 (8) 3,200.00 (11) 190,000.00 (13) 48,001.00	(3) 2,400.00 (3) 115,200.00 (4) 21,600.00	275,999.00 Consolidated Surplus
Company B		150,000.00				(3) 6,000.00 (3) 115,200.00		28,800.00 M Common
Deficit:								
Company C			180,000.00				(13) 180,000.00	
Company D				6,000.00		(4) 27,000.00	(7) 22,000.00	*11,000.00* M Common
Company E					195,000.00	(8) 5,000.00	(11) 190,000.00	*10,000.00* M Common
	$959,999.00	$350,000.00	$420,000.00	$244,000.00	$155,000.00	$1,439,200.00	$1,439,200.00	$1,238,999.00

Key to Adjustments

(1) Elimination of investment in Company B preferred stock.
(2) Elimination of investment in Company B common stock.
(3) Transfer of the B Company preferred dividend accrued to consolidated earned surplus and to the minority interest, and transfer of the surplus applicable to the common stock owned to consolidated earned surplus.
(4) Transfer of preferred dividends accrued on the D Company stock to consolidated earned surplus and to the minority interest.
(5) Elimination of investment in the D Company preferred stock.
(6) Elimination of investment in Company D common stock.
(7) Transfer of 66⅔% of the deficit applicable to the D Company common stock to consolidated earned surplus.
(8) Transfer of accrued dividends on the E Company first preferred to that account.
(9) Elimination of investment in Company E second preferred stock.
(10) Elimination of investment in Company E common stock.
(11) Transfer of 95% of the deficit applicable to the Company E common stock to consolidated earned surplus.
(12) Elimination of investment in Company C.
(13) Transfer of the Company C deficit to the minority interest, consolidated earned surplus and to the reserve for loss on investment in Company C.
(14) Elimination of intercompany accounts receivable and payable.

SCHEDULE OF DIVIDENDS IN ARREARS ON PREFERRED STOCKS

	Total	Applicable to		December 31, 1936, Allocation	
		Company A	Minority	Company A	Minority
Company B	$ 6,000.00	$ 2,400.00	$ 3,600.00	$ 2,400.00	$ 3,600.00
Company D	27,000.00	21,600.00	5,400.00	21,600.00	5,400.00
Company E:					
1st preferred	9,000.00		9,000.00		9,000.00
2nd preferred	24,000.00	19,200.00	4,800.00		
	$66,000.00	$43,200.00	$22,800.00	$24,000.00	$18,000.00

NOTES (1) While the preferred stock of Company B is noncumulative it must be assumed that because a profit was made during the year a dividend for one year will be paid before any distribution is made to the common stockholders.
(2) In this solution it is assumed that the first preferred stock of Company E is preferred in liquidation over the second preferred stock to the extent of the par value plus accrued dividends.
(3) While Company C is apparently insolvent it will be noted that the only creditors are also the stockholders of the company and that the equities of the creditors are in the proportions of their stockholdings. Since there are no outside creditors the company cannot be regarded as insolvent and for this reason the accounts were consolidated.
(4) In this solution the deficits applicable to the minority interests were applied against those interests. As a matter of practice it is quite common for the parent or holding company to absorb the minority deficits. This latter treatment would be acceptable.

SCHEDULE OF MINORITY SHAREHOLDERS' INTEREST

Company B:			
6% preferred stock	$60,000.00		
Accrued dividend	3,600.00	$63,600.00	
Common stock	$20,000.00		
Surplus	28,800.00	48,800.00	$112,400.00
Company C:			
Accounts payable		$200,000.00	
Less deficit unabsorbed by interest in capital stock		32,000.00	168,000.00
Company D:			
6% preferred stock	$20,000.00		
Accrued dividends	5,400.00	$25,400.00	
Common stock	$50,000.00		
Deficit	11,000.00	39,000.00	64,400.00
Company E:			
1st preferred stock—6%	$100,000.00		
Accrued dividends	9,000.00	$109,000.00	
2nd preferred stock—6%	$10,000.00		
Deficit	800.00	9,200.00	
Common stock	$10,000.00		
Deficit	10,000.00	——	118,200.00
Total			$463,000.00

SOLUTION TO PROBLEM 4

CITY OF CROIX

WORK SHEET

January 1, 1936 to December 31, 1936

Current Fund	Balance Sheet December 31, 1935		Transactions and Adjustments Debit	Transactions and Adjustments Credit	Balance Sheet December 31, 1936	
Cash	$ 15,482.34	$	(5) $1,237,794.25	(6) $1,248,256.00	$ 5,020.59	$
Taxes receivable: 1932	1,917.66			(5) 1,012.75	904.91	
1933	7,308.14			(5) 5,475.63	1,832.51	
1934	8,133.11			(5) 6,125.47	2,007.64	
1935	123,170.65			(5) 115,245.78	7,924.87	
1936			(2) $1,018,603.75	(5) 787,375.62	231,228.13	
Estimated revenues—1936			(11) 300.65	(5) 107,309.00		
			(1) 1,125,612.10	(2) 1,018,603.75		
Appropriations—1936			(3) 1,287.10			
			(4) 17,200.00	(1) 1,125,612.10		
			(6) 1,104,505.00			
			(11) 2,620.00			
Over-expenditure of 1935 appropriations	437.10			(3) 437.10		
Taxes cancelled—1935	850.00			(3) 850.00		
Tax revenue notes: 1933		7,000.00	(6) 7,000.00			
1934		8,000.00	(6) 6,000.00			2,000.00
1935		123,000.00	(6) 114,000.00			9,000.00
1936				(5) 215,000.00		215,000.00
Accounts payable: 1935		17,601.00	(6) 16,751.00			850.00
1936				(4) 17,200.00		17,200.00
Surplus revenue		1,698.00				4,868.65
Miscellaneous fees				(5) 250.00		
Excess of appropriations over expenses				(11) 300.65		
Excess of actual revenue over estimated				(11) 2,620.00		
	$157,299.00	$157,299.00			$248,918.65	$248,918.65
Capital Fund						
Cash	$ 17,810.95	$	(7) 30,000.00	(8) 43,243.57	$ 4,567.38	$
Improvements in progress	39,152.62		(8) 5,900.00	(9) 30,000.00	15,052.62	
Deferred charges to future taxation for cost of completed improvements	25,380.00		(9) 30,000.00	(10) 7,000.00	48,380.00	
Serial bonds		26,000.00	(10) 7,000.00	(7) 30,000.00		49,000.00
Notes payable		49,000.00	(8) 30,000.00			19,000.00
Accounts payable		7,343.57	(8) 7,343.57			
	$ 82,343.57	$ 82,343.57	$4,761,917.42	$4,761,917.42	$ 68,000.00	$ 68,000.00

Key to Adjustments

(1) To set up budget of estimated revenue and appropriations.
(2) To set up taxes receivable.
(3) To charge 1935 over—expenditure and 1935 taxes cancelled against appropriations.
(4) To charge 1936 appropriations for unpaid 1936 bills.
(5) To record cash receipts of current fund.
(6) To record cash disbursements of current fund.
(7) To record cash receipts of capital fund.
(8) To record cash disbursements of capital fund.
(9) To transfer completed improvements to deferred charges for future taxation.
(10) To record bonds retired.
(11) To transfer balances in appropriations and estimated revenues accounts to surplus revenue.

SOLUTION TO PROBLEM 5

January 1, 1937		
Y Company Option Account	$1,800,000.00	
Cash		$1,800,000.00
Paid for option to purchase 18,000 shares of Y Company stock at $200 per share, option payment to be applied on purchase price.		
January 15, 1937		
Y Company Trustee	420,000.00	
Cash		420,000.00
Purchase of 2,000 shares of Y Company stock at $210 per share, said stock being deposited with trustee pending payment of liquidating dividends to old stockholders.		
May 30, 1937		
Y Company Trustee	400,000.00	
Y Company Dividend Account		400,000.00
Regular dividend of $20 per share on 20,000 shares of stock of Y Company received by trustee.		
October 15, 1937		
Y Company Trustee	200,000.00	
Y Company Dividend Account		200,000.00
Regular dividend of $10 per share on 20,000 shares of stock of Y Company received by trustee.		
October 15, 1937		
Y Company Trustee	3,000,000.00	
Y Company Option Account		1,800,000.00
Cash		1,200,000.00
Exercise of option to purchase Y Company stock, and payment of $30 per share held by trustee and $70 per share balance.		
October 15, 1937		
Patent Rights	3,420,000.00	
Y Company Dividend Account	600,000.00	
Y Company Trustee Account		4,020,000.00
To record surrender of stock of Y Company, liquidation of Y Company and acquisition of patent rights.		

STATEMENT OF COST OF PATENT RIGHTS

Stock Purchases		
18,000 shares of Y Company stock at option price of $200 per share	$3,600,000.00	
2,000 shares of Y Company stock at $210 per share	420,000.00	$4,020,000.00
Less: Dividends received and applied on purchase price		600,000.00
Net Cost of Patent Rights		$3,420,000.00

NOTE. In this solution it was assumed that those shareholders who refused the original offer received the liquidating dividends in addition to the price of $210.00 per share. The problem states that the 2,000 shares purchased on January 15, were turned over to the trustee, therefore it would seem that the sellers retained some interest in the stock.

SOLUTION TO PROBLEM 6

Labor costs on old basis—70% of total cost.
On new basis with 10% increase they are 77/107 of total cost.

December costs as shown: Labor—77/107 of total cost	$47,495.32
Other costs	18,504.68
Total as shown 24,000×$2.75	$66,000.00
Increase Labor charge by 2/50 of $47,495.32	1,899.81
Adjusted Total Cost	$67,899.81

THE BROWN COMPANY

INVENTORY VALUATION

	Units	Unit Cost	Total Cost
At December Cost	24,000		$ 67,899.81
At September Cost	20,000	$2.20	44,000.00
At August Cost	6,000	2.25	13,500.00
Total Inventory	50,000		$125,399.81

NOTES: (1) October and November costs should be excluded as they are not months of normal production.
(2) The problem states that "vacations will be taken" and that "no provision has been made in the company's records for this additional concession." From this it was assumed that no vacations were taken in December and that as a consequence the labor cost for December was understated in the records by 2/50 of the recorded amount.

GENERAL COMMENTS

It would be difficult to say that the section presented above is a suitable test for the prospective accountant. With the exception of problem 1, and perhaps problem 3, the examination was largely routine and mechanical in character.

Additional information in problem 1 would have made it an excellent one; yet as it stands it is by all odds the best problem of the section, for it required the candidate to display a practical knowledge of balance-sheet presentation.

It is doubtful if problem 2 is adequate for a C.P.A. examination, particularly in view of its weight of 30 points. The principal value of this problem lies in the testing of the examinee's ability to perform pencil and paper work.

The candidate was given a choice of solving either problem 2 or problem 3. Problem 3 is a good problem containing a number of points requiring the candidate's careful judgment, but why it was made optional with problem 2 is difficult to understand. The C.P.A. examinee should be expected to possess sufficient knowledge of his subject to solve both problems.

There is doubt in the writer's mind as to the desirability of optional problems, and the situation presented in this examination only goes to increase that doubt. Two totally dissimilar problems cannot be of equal value and consequently are not comparable tests of a candidate's knowledge. Further, when optional problems carry the weight given to problems 2 and 3 the candidate is forced to spend considerable time studying both problems in order that he may make an intelligent choice between the two.

Problem 4 is a routine type of problem requiring nothing beyond an elementary knowledge of governmental accounting procedure.

Problem 5 was optional with problem 6; neither of them have much significance. Problem 5 is extremely simple, though it was necessary to make certain assumptions in order to solve it. Problem 6 is nothing more than an easy problem in arithmetic.

The time allotted, five hours, was ample. Those interested in solving these problems independently, may find the following suggested time schedule helpful:

Problem 1—1½ hours
Problem 2—1 hour
Problem 3—1 hour
Problem 4—45 minutes
Problem 5—30 minutes
Problem 6—30 minutes

ACCOUNTING AND THE S. E. C.

FOLLOWING are five more cases continuing the series which commenced in the September issue of the ACCOUNTING REVIEW. These cases are résumés of situations of interest to accountants, arising in the work of the Securities and Exchange Commission. In each instance, a problem appears together with the solution brought about by recommendations of the Commission's staff. The names of registrants do not appear; but if further study of any one or more cases is desired, the names may be secured from the editor of the REVIEW.

The comments on page 426, following the cases, are the Editor's.

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7. As originally filed, a balance sheet showed the following:

CAPITAL STOCK

$7 Preferred stock without par value (cumulative and convertible—Note D)

Authorized	5,500 Shares	
Issued	4,102 Shares	
In treasury	1,360 Shares	
Outstanding	2,742 Shares	$102,550

"NOTE D: Undeclared cumulative dividends on the $7 Preferred Stock without par value, amounted at September 30, 1936 to $43.25 per share, or a total of $118,591.50."

As may be seen from the foregoing, no mention was made of the fact that the preferred stock had a liquidating value of $110 per share. In order to disclose this feature, the balance sheet was amended as follows:

CAPITAL STOCK

$7 Preferred stock without par value (cumulative and convertible; liquidating value—per share $110.00, aggregate—$301,620.00, plus accrued dividends; Note D);

Authorized	5,500 Shares	
Issued	4,102 Shares	
In treasury	1,360 Shares	
Outstanding	2,742 Shares	$102,550

"NOTE D: Undeclared cumulative dividends on the $7 Preferred Stock without par value, amounted at September 30, 1936 to $43.25 per share, or a total of $118,591.50. Including such accrued dividends, the liquidating value at September 30, 1936 of the then outstanding shares of $7 Preferred Stock without par value, was $420,211.50. This was $83,381.62 in excess of the capital and consolidated surplus of the company and its subsidiary."

8. The accountants' certificate contained in the registration statement of a public-utility company, as first filed, included the following paragraph:

"The financial statements have been prepared in accordance with the accounting procedure required by the service-at-cost franchise granted by the City of (see Exhibit I filed with registration statement No. 0000), and the statements are to be read only in connection with the requirements of that franchise. The provisions of the franchise relating to the accounting procedure and financial statements are referred to in notes appended to the annexed balance sheet as at December 31, 1936 and this certificate is subject to the notes."

Following this paragraph were several others disclosing certain practices resulting from the franchise requirements.

Pursuant to the suggestions of the Commission's staff, the above-quoted paragraph was restated as follows:

"The financial statements have been prepared in accordance with the accounting procedure required by the service-at-cost franchise granted by the City of —— (see Exhibit I filed with registration statement No. ——), and requirements of that franchise. *The accounting procedures required by the franchise, and therefore followed by the company, are not in accordance with the generally accepted principles of accounting in certain respects,* as more fully set forth hereinafter and in notes appended to the balance sheet." (Italics supplied.)

9. In 1925 a manufacturing company wrote up its assets $68,886 and used $18,886 of the resulting surplus to wipe out a deficit in the earned-surplus account. At the same time it increased its capital stock from $100,000 to $150,000, transferring the remaining $50,000 of the appraisal surplus to

the capital-stock account. In 1936 the company again restated its capital stock creating a capital surplus of about $22,000 (part of which was later restored to capital) and immediately wrote off thereagainst an earned deficit of $15,500. Subsequently, the company had earnings from which it declared a stock dividend and, at the time of the balance sheet on May 31, 1937, showed an earned surplus of about $1,300, reflecting on the face of the earned surplus account the fact that it was after writing off $15,500 deficit. However, the auditors in their examination found that the deficit should have been somewhat greater than that shown on the books in 1936 and that accordingly the surplus was not a cleanly-dated surplus since only part of the actual deficit was cared for by the write-off in 1936.

The Commission's staff was of the opinion that surplus arising from appraisal should not be used to write off an earned deficit and that although there was, in a sense, a recapitalization in 1936, the write-off should be represented as a reduction of the original contributed capital. In view of this the company decided to wipe off its entire earned surplus as of May 31, 1937 and date its earned surplus from that date forward, thereby leaving nothing but a relatively small amount of capital surplus in the accounts.

This was done and the registration statement was amended accordingly. The accountants' certificate was also amended to read as follows:

"On November 20, 1935, shareholders of the Company approved a plan of reorganization, effective December 1, 1925, whereby the outstanding stock of the Company, consisting of 1,000 shares of capital stock of a par value of $100 a share and having an aggregate stated value of $100,000.00 was exchanged for 1,500 shares of common stock, without par value, having a stated value of $150,000.00; the existing deficit of $18,886.45 was eliminated; and property, plant and equipment and certain security investments were written up in the amount of $68,886.45, based upon appraisal of such assets by the Board of Directors. In December 1936, stated capital was reduced by the amount of $22,300.00 (of which the amount of $6,800.00 was restored to stated capital in May, 1937) and the net amount of $13,839.29 out of such reduction has been used to eliminate deficit in earned surplus up to May 31, 1937 thereby authorizing the Company to open a new earned-surplus account as of June 1, 1937. As of May 31, 1937, the net amount of $53,059.93 of the write-up mentioned above remained in the property, plant and equipment accounts. In our opinion it is not in accordance with accepted accounting principles to charge deficits in earned surplus accounts against unrealized appreciation. Therefore, on the basis of accepted accounting principles the above deficits are chargeable against contributed capital. As of the balance sheet date, the capital accounts consist, therefore, of contributed capital of $139,126.52 (including the amount of $15,826.52 for unrealized appreciation written off) less deficits aggregating $32,725.74 plus unrealized appreciation of $53,059.93 remaining in the property, plant and equipment accounts."

10. The income statement of a paper-manufacturing company bore the following footnote:

"Because of the write-down of fixed assets as of December 31, 1932, described under 'Historical Financial Information,' depreciation and depletion as per books have been less than amounts allowable in computing income subject to Federal taxes."

The Commission's staff was of the opinion that, inasmuch as the registrant had called attention to a change in its depreciation and depletion policies, this footnote should be expanded to indicate the effect in dollars and cents of the change.

Accordingly the following sentence was added to the footnote to the income statement:

"If the fixed assets, that is, real estate, machinery and equipment, woodlands and stumpage, had not been written down as at December 31, 1932, the charges against income for depreciation and depletion in the years 1934, 1935 and 1936 would have been greater by $165,844, $148,193 and $153,234, respectively, than the charges for depreciation and depletion as per books; and the income statement on this assumption, would have shown a net loss of $205,363 for 1934, a net loss of $51,136 for 1935 and a net income of $118,443 for 1936; and the earned surplus of the company as at December 31, 1936 would be $2,971,198.80

instead of $1,047,961.26 as in the accompanying balance sheet."

11. The balance sheet of a distilling company showed "Fixed Assets: Property, plant and equipment at cost—(Schedules 1 and 2)—Notes A & B—$81,952.44." The notes and schedules referred to indicated that, of this amount, $48,343.81 represented property "purchased on a lease-purchase contract," was payable as rent, in monthly instalments and "at the expiration of the ten-year period legal title is to pass to the purchaser." Liabilities were included in the balance sheet under "Long Term Debt" and "Current Liabilities" for the amount unpaid pursuant to the lease-purchase contract. It was not disclosed, however, that, under the terms of the lease-purchase contract, in the event the registrant failed at any time to comply with the terms of such contract, no interest in the property would accrue to the registrant.

In the opinion of the Commission's staff, because of the nature of the contract, it was improper to designate on the balance sheet any part of the amount to be expended under the lease-purchase contract as "Property, plant and equipment" before the expiration and fulfillment of the contract. It was also thought that the conditional terms of the contract should be disclosed fully.

Accordingly, an amended balance sheet was filed wherein the item in question was shown separately as "Lease Purchase Contract (Land and Buildings)—Note A." Note A, as amended, recited the terms of the contract at length.

COMMENTS

Case 7 brings to light a corporate financial practice that has grown out of the depression. Here the company in 1931 scaled down its capital stock for the purpose of absorbing (a) a deficit and (b) the cost of purchased preferred stock in the treasury; the balance left at September 30, 1936, was $143,319.60. Earned surplus on the latter date, accumulated of course since 1931, was $85,433.28, and the amount recorded as capital opposite 14,502 shares of no-par-value common stock was $5,527.00. If the figures given in this case, together with those just cited, are put together in a somewhat different way, surprising results may be observed:

Equity of preferred stock:			
2.742 shares outstanding at liquidating value of $110 per share			$301,620.00
Cumulative dividends in arrears of $43.25 per share			118,591.50
Total equity			$520,211.50
Less—Net consolidated assets available, per financial statements:			
Preferred stock		$102,550.00	
Common stock		5,527.00	
Capital Surplus		143,319.60	
Earned Surplus—			
Parent Company	$38,754.24		
Subsidiary	46,679.04	85,433.28	336,829.88
Deficit in equity of preferred stockholders ($130,060.66 on unconsolidated basis)			$83,381.62

The Commission properly required that this deficit be disclosed. It is unfortunate that present-day accounting techniques do not require that the equities of each class of stockholders be displayed on the balance sheet. In ordinary cases the disclosure would not be particularly significant; here it is of the utmost significance, for the common stockholders have no equity in the net assets.

In Case 8, the accountant's certificate was amended by the insertion of the italicized material which brings out the statement, not previously made clear, that the accounting practices called for by the franchise were not in line with accepted procedures. The necessity for this qualification is found in the standard certificate form which includes the words " . . . accepted principles of accounting consistently maintained . . . ." The accountant's certificate in this instance did not contain this phrase; but the fact that the standard-certificate form has been so widely accepted imposes on the accountant the practical necessity of calling attention to its absence.

Case 9 brings out a situation where a confused set of accounts has to be recast before it can become intelligible; even after it has been recast it has to be qualified because "contributed capital" contains "unrealized

appreciation." Perhaps this showing is a shade better than the original, where unrealized appreciation was used to absorb a deficit. It would have been better undoubtedly to keep unrealized appreciation out of the net-worth accounts and to treat it as a valuation account.

The facts of Case 10, after proper disclosure had been made, indicate that had a full amount of depreciation and depletion been allowed, based on what was presumably original cost, the operating loss for 1934 would have been five times as large; an operating loss for 1935 of $50,000 would have resulted instead of a reported profit of $100,000; and the operating profit for 1936 would have been more than halved. It should go without saying that differences as large as this between taxable income and income reported to stockholders should be fully explained to the investor and creditor. In this instance, unfortunately, it has been impossible to determine whether the registration statement contained an adequate account of the writedown of assets referred to; from the information given the reader is left in doubt as to its significance.

THE ACCOUNTING EXCHANGE

The Admission of a Partner by Investment

It has been my observation that first-year accounting students have considerable difficulty in learning how to make calculations for the admission of a partner by investment. The calculations for goodwill or for bonus, and the journalizing of the results seem to contain somewhat more than ordinary difficulty.

The method presented here is simple; yet it is reasonably complete. It sets forth the five possible cases in concrete form, permitting the student to realize that the whole procedure is actually easy. The process contains certain logical steps that aid the student in grasping and retaining it.

The order of cases illustrated is: bonus to old partners; good will to old partners; bonus to new partner; goodwill to new partner; investment at book value.

Given: X and Y are partners with capital balances of $45,000 and $27,000, respectively after revaluations, if any, are made. They share profits in the ration of 2:1. Z buys an interest in the firm under one of the following situations:

(a) One-fourth interest for $52,000, goodwill ignored;

	(a)	(b)	(c)	(d)	(e)
Old partners' capital	$72,000	$72,000	$72,000	$72,000	$72,000
New partner's investment	52,000	52,000	19,000	19,000	63,000
Goodwill	—	84,000	—	9,800	—
	4)$124,000	4)$208,000	7)$91,000	7)$100,800	15)$135,000
			13,000	14,400	9,000
			2	2	7
New partner credited for	$31,000	$52,000	$26,000	$28,800	$63,000

(b) One-fourth interest for $52,000, goodwill recorded;

(c) Two-sevenths interest for $19,000, goodwill ignored;

(d) Two-sevenths interest for $19,000, goodwill recorded;

(e) Seven-fifteenths interest at book value.

Required: (1) A schedule of calculations; (2) journal entries for the five cases.

Solution

(1) *Schedule of Calculations*

Calculations:

Case (b): $\$72,000 \div \frac{3}{4} = \$96,000$

$\$52,000 \div \frac{1}{4} = \$208,000$

Case (d): \$72,000 ÷ 5/7 = \$100,800
\$19,000 ÷ 2/7 = \$66,500

Case (e): \$72,000 ÷ 8/15 = \$135,000

(2) *Journal Entries*

(a)

Cash	\$52,000	
X, Capital		\$14,000
Y, Capital		7,000
Z, Capital		31,000

To record the admission of Z as a partner with a one-fourth interest on an investment of \$52,000; goodwill ignored.

(b)

Cash	\$52,000	
Goodwill	84,000	
Z, Capital		\$52,000
X, Capital		56,000
Y, Capital		28,000

To record the admission of Z as a partner with a one-fourth interest on an investment of \$52,000; goodwill recorded.

(c)

Cash	\$19,000	
X, Capital	4,667	
Y, Capital	2,333	
Z, Capital		\$26,000

To record the admission of Z as a partner with a two-sevenths interest on an investment of \$19,000; goodwill ignored.

(d)

Cash	\$19,000	
Goodwill	9,800	
Z, Capital		\$28,800

To record the admission of Z as a partner with a two-sevenths interest on an investment of \$19,000; goodwill recorded.

(e)

Cash	\$63,000	
Z, Capital		\$63,000

To record the admission of Z as a partner with a seven-fifteenths interest on an investment of \$63,000; which is book value.

In order to simplify the process for the sake of teaching it, the thought and expression "ignoring goodwill" is substituted for the ordinary conception and term "bonus." It seems easier to build upon the idea of either recording or ignoring goodwill than to include the additional notion of bonus. After the subject has been discussed, the fact that the ignoring of good will means giving a bonus in ownership to someone can be made clear in one statement to the class.

Case (a): Since goodwill is ignored, the capital balances can total no more than the sum of the old and new investments; Z gets his one-fourth of that total. For the journal entry to record the transaction, there are two important figures which stand forth conspicuously in the table—the amount of the investment and the capital which Z receives. Only one logical thing can be done to make the debit and credit entries balance: credit the old partners' capital accounts, in their profit-and-loss ratio, with the difference. Hence, goodwill is reflected to the old partners through their receipt of capital credit from Z's investment, which is a bonus to them.

Case (b): Because of the fact that goodwill is recorded, either the old partners' capital will be increased or the new partner will receive more credit than the amount of his investment. Hence, when the transaction has been completed, either the old or the new investment will have been changed and the other will remain as it was. Then, in calculating the total capital investment for all, including goodwill credited to capital, both investments can be used as possible bases for the total which is to be found.

In the present case the old partners are to retain a three-fourths interest and the new partner is to receive a one-fourth interest. A total capital figure is required of which three-fourths is \$72,000 or one-fourth is \$52,000. Dividing \$72,000 by $\frac{3}{4}$, a quotient of \$96,000 is obtained. But that figure is too small to contain the existing investment balances. Dividing \$52,000 by $\frac{1}{4}$, \$208,000 is obtained as the total capital. The goodwill is the figure necessary to make \$72,000 and \$52,000 add to \$208,000.

It is significant that in such processes as described just above, one quotient will be too small to contain the existing balances of capital. Of course, the larger is chosen in every instance.

Also, it will be observed from cases (b) and (d) that when goodwill goes to the new partner, the total capital is found by using the investment of the old partners, for it remains unchanged. In the same manner, when goodwill goes to the old partners, the

investment of the new partner is used as the base, it remaining unchanged throughout.

Case (c): This case is similar to (a) above. The investments are totaled and the new partner receives credit for his specified share. In order to balance the entry, there must be additional debits which go, obviously, to the old partners' accounts.

Case (d): This case is solved as was case (b) above. The investments of the old and new partners, taken separately, are used as possible bases for the total capital. The greater quotient ($72,000÷5/7=$100,800) is used. However, in this case the goodwill goes to the new partner, his capital being computed at $2,800 more than his investment, that being the amount of the computed goodwill.

Case (e): Since there is no goodwill, according to the given conditions, either the old or the new investment can be used as the base for total capital; but only the old investment is known. That figure is divided by the fraction of the partnership interest which the old partners will retain. The total capital thus obtained will be diminished by the old investment in order to find the amount of the new investment.

Robert A. White

Analysis of Variation in Net Profit

A topic usually covered in a course in general accounting is the statement of variation in net profit. The data used includes a comparative statement of profits and information regarding quantities sold, unit sales price, or unit cost of sales.

The approach to analysis of variation in net profit from one period to the next may be in—

(1) Narrative form
(2) Worksheet form.

The narrative form has, within the writer's knowledge, been the customary approach in the accounting texts that discuss the subject. A more effective teaching device is believed to be represented by the so-called worksheet approach for the analysis preliminary to the preparation of the statement of variation.[1] The advantage consists of the greater simplicity and brevity of the former over the latter.

The worksheet approach is useful for analyzing the changes in all the variable factors reported as influencing net profit. Usually, however, information regarding selling and general and administrative expenses and other income is limited to their respective amounts in the comparative profits statement. Additional information necessary would include (1) portions variable and portions not variable with volume of business, and (2) data as to standards previously set for the items. Unless more facts are furnished regarding the items referred to, it seems desirable to use the worksheet approach only up to the gross-profits stage. The variation in the other items of expense and income must still be made, but the analysis in connection therewith may be shown directly on the final statement of variation. This statement will, accordingly, (1) summarize the results of the worksheet analysis as to why gross profit varied and (2) present the changes in the selling, general and administrative expenses and other in-

[1] Messrs. Taylor and Miller, in their Intermediate Accounting, I (1933) p. 73, discuss the worksheet approach as an alternative method adapted from a form suggested by D. S. Bolon.

Basis of Illustrative Cases	1935	1936	Increase or Decrease*
Net Sales	$150,000	$196,000	$46,000
Cost of Sales	120,000	147,000	27,000
Gross Profit on Sales	$ 30,000	$ 49,000	$19,000
Expenses	21,000	19,600	1,400*
Net Profit from Operations	$ 9,000	$ 29,400	$20,400
Other Income	500	600	100
Net Profits to Surplus	$ 9,500	$ 30,000	$20,500

come. The statement ends up with the amount of variation in net profit.

The worksheet approach is illustrated below under four cases. The basis of all four cases is the condensed comparative profits statement given. In addition, each case assumes information as to one of the following: quantity sold, per cent change in quantity sold, per cent change in unit sales price, or per cent change in unit cost of sales.

Case 1

Given—

1. Comparative condensed profits statement
2. Number of units sold in each of the years—
   1935—3000 units
   1936—3500 units

Worksheet

(Col. 1) Particulars	(Col. 2) 1935 actual	(Col. 3) 1936 at 1935 costs and prices	(Col. 4) 1936 actual
I. Sales—			
3000 at $50	$150,000(A)	—	—
3500 at $50	—	$175,000(B)	—
3500 at $56	—	—	$196,000(C)
II. Cost of Sales—			
3000 at $40	120,000(D)	—	—
3500 at $40	—	140,000(E)	—
3500 at $42	—	—	147,000(F)
Gross Profit	$ 30,000(G)	$ 35,000(H)	$ 49,000(I)

The difference between the figures of Col. 2 and Col. 3 is due to quantity difference; the difference between the figures of Col. 3 and Col. 4 is due to price difference. This relationship always obtains regardless of the unknown factor to be determined.

Statement of Change in Gross Profit

Increase in Gross Profit Caused by—			
Increase in quantity sold—			
1936	3500		
1935	3000		
	500 at 1935 gross profit rate of $10 per unit		$5,000 (H-G)
Increase in selling price—			
1936	$56		
1935	50		
	$ 6 on 3500 units sold in 1936		21,000 (C-B)
Increase in cost price—			
1936	$42		
1935	40		
	$ 2 on 3500 units sold in 1936		*7,000* (F-E)
		Increase in gross profit	$19,000

Case 2

Given—

1. Comparative condensed profits statement—same as in case 1.
2. Quantity sold increased 16⅔ per cent.

Worksheet

(Col. 1) Particulars	(Col. 2) 1935 actual	(Col. 3) 1936 at 1935 costs and prices	(Col. 4) 1936 actual
I. Sales—			
1935—actual	$150,000(A)	—	—
1936—116⅔% of 1935 actual	—	$175,000(B)	—
1936—actual	—	—	$196,000(C)
II. Cost of Sales—			
1935—actual	120,000(D)	—	—
1936—116⅔% of 1935 actual	—	140,000(E)	—
1936—actual	—	—	147,000(F)
	$ 30,000(G)	$ 35,000(H)	$ 49,000(I)

Statement of Change in Gross Profit

Increase in Gross Profit Caused by—		
Increase in quantity sold—		
1935—gross profit—actual	$ 30,000	
1936—gross profit—116⅔% of 1935 actual	35,000	$ 5,000 (H-G)
Increase in selling price—		
1936—actual	$196,000	
1936—116⅔% of 1935 actual	175,000	21,000 (C-B)
Increase in cost price—		
1936—actual	$147,000	
1936—116⅔% of 1935 actual	140,000	*7,000*(F-E)
Increase in gross profit		$19,000

Case 3

Given—

1. Comparative condensed profits statement—same as in case 1.
2. Selling price increased 12%.

Worksheet

(Col. 1) Particulars	(Col. 2) 1935 actual	(Col. 3) 1936 at 1935 costs and prices	(Col. 4) 1936 actual
I. Sales—			
1935—actual	$150,000(A)	—	—
1936—100/112 of 1936 actual	—	$175,000(B)	—
1936—actual	—	—	$196,000(C)
II. Cost of Sales—			
1935—actual	120,000(D)	—	—
(A) 1936—116⅔% of 1935 actual	—	140,000(E)	—
1936—actual	—	—	147,000(F)
Gross Profit	$30,000(G)	$ 35,000(H)	$ 49,000(I)

The difference between (C) and (A) is $46,000, of which $21,000 ((C)—(B)) is due to the 12% increase in selling price. This means that the remaining difference of $25,000 ((B) −(A)) is due to an increase in volume. Expressed in percentage, this increased volume is 16⅔% (i.e., 25,000/150,000). This percentage may therefore be used to segregate "volume" change in cost of sales from "price" change.

The statement prepared from the foregoing worksheet analysis is the same as that presented under case 2.

Case 4

Given—

1. Comparative condensed profits statement—same as in case 1.
2. Cost of sales increased 5%.

Worksheet

(Col. 1) Particulars	(Col. 2) 1935 actual	(Col. 3) 1936 at 1935 costs and prices	(Col. 4) 1936 actual
I. Sales—			
1935—actual	$150,000(A)	—	—
(A) 1936—$116\frac{2}{3}\%$ of 1935 actual	—	$175,000(B)	—
1936—actual	—	—	$196,000(C)
II. Cost of Sales—			
1935—actual	$120,000(D)	—	—
1936—100/105 of 1936 actual	—	$140,000(E)	—
1936—actual	—	—	$147,000(F)
Gross Profit	$30,000(G)	$ 35,000(H)	$ 49,000(I)

The difference between (F) and (D) is $27,000, of which $7,000 ((F)−(E)) is due to the 5% increase in cost of sales per unit. This means that the remaining difference of $20,000 is due to an increase in volume. Expressed in percentage, this increased volume is $16\frac{2}{3}\%$ (i.e., 20,000/120,000). This percentage may therefore be used to segregate "volume" change in sales from "price" change. Note that the worksheet analysis begins with part II in this case since the known factor is under this part.

The statement prepared from the foregoing worksheet analysis is the same as that presented under case 2.

Harry D. Kerrigan

BOOK REVIEWS

Cost Accounting, Principles and Methods. Charles Reitell and C. E. Johnston. Second Edition. Revised by C. E. Johnston. (Scranton, Pa.; International Textbook Company, 1937. Pp. x, 425.)

The first edition of this book went through four printings from May, 1933, to October, 1936. This revision, the second edition, had its first printing in September 1937. A number of refinements have been included involving some additions and some changes in the previous presentation.

The basic organization of the work has been changed somewhat. Actual paging has been reduced from 441 pages to 425. The first edition consisted of eight parts as follows: Basic Elements of Cost; Control and Costing of Materials; Control and Costing of Labor; Control and Costing of Overhead—Cost Summaries; Process and Special-order Cost Systems; Distribution, administrative, and Special Costs; Budgets and Standard Costs; and Cost Reports for Executives. This new edition has grouped the material into five parts. They are: Basic Cost Principles; Control and Costing of Manufacturing Cost Elements; Process and Job-order Cost Systems; Standard Costs and Budgets; and Executive Use of Costs. It might appear that the changes involve the combining of the parts discussing control and costing of material, labor, and overhead of the old edition into one part in the new and in omitting the part on distribution, administrative, and special costs. A more careful examination of the new organization, however, shows that the changes are of more importance than this.

The first part of the new edition, dealing with basic cost principles, does not contain any material changes over the old edition. A slight change in chapter order and the addition of a chart are the major differences.

The second part of the new edition is a combination of the second, third, and fourth parts of the old. This has to do with the control and costing of manufacturing cost elements. The same general treatment is accorded to the discussion of the elements of cost in this new edition, but it has been condensed by about one-sixth to make room for other new material presented later. This condensation does not seem to harm the presentation materially. A certain amount of detail has, of course, been eliminated. A reduction of about twenty-five pages of an original one hundred fifty represents the amount of condensation.

The third part discusses process and job-order cost systems. This compares with part five of the old edition, although the changes are more definite at this point. The details relative to process costs have been reduced materially. Only half as much space is devoted to this subject in the new volume. The treatment of job-order systems is about the same in both volumes. A new subject is added in this volume, treating By-Product and Joint-Product Costs. The chapter is very short, however, so the discussion is rather general. There is no doubt that such a subject needs treatment in a complete treatise on cost accounting, but the many problems relative thereto make it very difficult to present.

The last parts of the new edition show the greatest changes in organization and content. Standard costs and budgets still receive a complete and excellent treatment. The relation of budgets and distribution costs is new material and makes a valuable addition to the work. Although such costs were treated in the old edition, their relation to standards and budgets was not emphasized. This change follows through the idea of the authors that a complete cost system is curtailed if the costing of distribution items is omitted.

The last part of the volume, formerly dealing only with the use of costs by executives, now adds a chapter on trade associations and uniform cost accounting. This chapter helps bring the entire text to a logical conclusion.

Your reviewer has taken the attitude here that since this is a new edition of an older volume, the points of interest would be the changes from the old to the new. No attempt has been made to review the basic concepts in detail. Let it suffice to say that the work is orthodox in general with an idea more advanced than many such texts, involving the budgeting and standardizing of distribution costs.

There are two manuals to accompany this volume, one a problem book and one containing solutions. There are no problems to be solved in the text proper.

The value and effectiveness of this volume have been increased by the changes made. These changes may be summarized as follows: emphasis of the costing of distribution expenses; changes in the chapter on standard costs; and two new chapters on by-products and joint-products and on trade associations and uniform cost accounting.

ROBERT P. HACKETT

University of Illinois

Introduction to Accounting Procedure: Book I. Practical Bookkeeping, pp. viii, 80. Book II. Secretarial Accounting, pp. viii, 93. Book III. Applied Accounting, pp. viii. 105. John A. Schur & Manford M. Haskell. (New York: Prentice-Hall, Inc., 1936; $1.12 each.) Practice Material to accompany the above: $.80 for Book I, $1.28 each for Books II and III.

One not inclined to take this work too seriously may undoubtedly find something of value in it. I suppose the books are intended to serve a useful purpose, and perhaps they do. There are persons, such as secretaries to professional people and the like, who are called upon to do a certain amount of bookkeeping as part of their work. It is possible they may find material sufficient for their needs in these three books. The publisher emphasizes the simplicity of the work and this is, unfortunately, all too true. Also he has decked out the books in tricky covers with equally tricky looking ring binders, "streamlined," I suppose is the current word, but no amount of outward decoration can hid a paucity of content.

Throughout the work the emphasis is solely on the

mechanics of bookkeeping, no attempt being made to present underlying accounting theory. Oversimplification is a characteristic fault of the entire work, leading sometimes to erroneous statements: "Reserves are . . . 'deductions from assets, and liabilities' . . . ." (III, p. 22). A diligent search through the chapters on Manufacturing and Cost Accounts fails to reveal even a trace of cost accounting. But why go on? Educationally the work is quite without merit and has no claim to consideration as part of an accounting curriculum.

THEODORE LANG

New York University

The Interpretation of Financial Statements. Benjamin Graham, Spencer B. Meredith with the collaboration of members of the New York Stock Exchange Institute. (New York: Harper & Brothers, 1937, pp. viii, 122. $1.00.)

This is the effort of two men who are capable of much more serious work than is indicated by the present small volume. Essentially the title of the book is a misnomer. Part I, consisting of thirty-four chapters, covering eighty pages in all, is devoted largely to an explanation of the meaning of the more common items appearing in balance sheets and profit and loss statements. Thus a page and a half suffice to explain the nature of a balance sheet; three and a half pages are devoted to debit and credit, etc. Part I, then, is a hurried study of the more obvious phases of valuation. Where then is the analysis? The impatient reader eagerly pounces on Part II of the book. It is entitled "Analyzing a Balance Sheet and Income Account by the Ratio Method." Alas! The subject is exhausted in eight pages. It presents an array of ratios for the guidance of the student or prospective investor. How much help the ratios are is of course problematical, particularly when no clear-cut pattern emerges after all the ratios have been worked out.

The analysis is notable for what it omits rather than for what it tells. Analysis through comparative balance sheets and comparative profit and loss statements is serious work and can hardly be introduced into a book designed for popular consumption.

By all odds the best part of the book is Part III, consisting of a glossary of financial terms and phrases covering thirty-two pages.

Popularization of knowledge is, I suppose, a good thing. It has its dangers. If it stimulates the student to further study, well and good. If, as so often happens, it is an end in itself rather than a means to an end, there is a certain danger. For a little knowledge is a dangerous thing. Picture a world full of people who have learned accounting in ten easy lessons, statement analysis in 122 pages, the secrets of the Stock Exchange (purchased for $1.00), not to mention outlines of history, literature, philosophy and economics, each in one handy volume, so that he who runs may read. Well, picture it!

THEODORE LANG

New York University

Aspects of the Organization, Functions and Financing of State Public Utility Commissions. C. O. Ruggles. (Boston: Harvard University, Bureau of Business Research, 1937, pp. vi, 90, $1.00.)

State Utility Commissions have had a somewhat checkered career, and as a rule have not risen very high in the public's esteem. Here in New York we have the Transit Commission whose work was made one of the issues in the recent mayoralty campaign. The commission's attitude has been characterized as one of ponderous somnolence, and its chief claim to fame recently has been its appointment of former Mayor Walker to a $12,000 a year position on its staff, an appointment which so far has not hurdled all legal obstacles. But here is a work which promises to take the reader behind the scenes, and show him what makes the wheels of utility bodies go around. If the work leaves the reader somewhat disappointed, this is not the fault of the material presented, but rather of the method of its presentation. For the statistical exhibits are excellent in themselves, but no amount of statistical presentation can of itself tell the whole story of the organization, functions, and financing of state regulatory bodies. We are therefore indebted to Professor Ruggles for the concluding chapter in his brief survey, in which he supplements the statistics with a descriptive analysis and draws his conclusions.

As far as the scope of the investigation is concerned, it seems to this reviewer that the methods of work of the various state commissions might profitably have been included. This would have furnished us a picture of the modus operandi of the commissions; its almost total absence impairs the usefulness of the work. True, a study of this particular aspect of state utility regulation would have entailed a considerable expansion in the scope of the work, but it might have been worth while. Another disappointment is due to the failure to mention the time when specific powers were assumed by or granted to the commissions. Thus it would be of considerable interest to know exactly when the commissions began prescribing uniform system of accounts, when they began to regulate security issues, etc.

The author introduces the discussion with a brief survey of the history and development of state regulation. This is followed by a chapter on the commissioners, their qualifications, training, selection, tenure, removal, salaries, etc. A similar inquiry shows the constitution of the commission staffs. This is followed by chapters on the development and character of the jurisdiction of commissions and of sources of funds for commission regulation. Finally comes a chapter embodying a general summary and conclusions.

The author shows that regulation through charters and franchises or by statute failed because it did not meet the needs of rapidly developing and expanding utilities (p. 71). However, the regional character of the industry created a condition where state regulation became inadequate, and since, prior to the Public Utility Holding Company Act of 1935, there was no Federal regulation, a sort of no-man's land between Federal and state regulation developed. A greater degree of coöperation between Federal and state bodies, and between state and municipal bodies is therefore urged; the suggestion for regional regulatory bodies with the

right of appeal to a Federal commission at Washington is excellent.

The author quite properly castigates the almost universal residence requirements of commissioners. "If the custom of calling able commissioners from one state to another were adopted in theory and followed in practice, the growth of a capable professional group of commissioners would be much encouraged." (p. 72)

Commissioners should not be elected but appointed preferably from a list submitted to the governor by a nonsalaried advisory council. Tenure should be for longer periods than is the general rule at present, and there should be a provison for some "period of time to elapse after his (the commissioner's) service on a commission before he may be employed by a public utility" (p. 73). All too often the tendency in governmental service is for the individual to "cash in" on his experience by taking employment at higher salaries with private employers. Higher salaries for competent commissioners and their staffs, together with abolition of present residence requirements, and prohibition of political activity, would presumably tend to remedy this condition.

Better financing of state commissions is necessary. The author approves in general the assessment plan as against the plan of legislative appropriations. The latter are apt to be curtailed during a depression just when there is the greatest need for them. On the other hand, if utilities are to be assessed and made to bear the brunt of the cost of investigating and regulating them, a strict accounting for these funds becomes essential, to prevent their diversion by the legislature to other purposes.

The degree of interference with the operations of a utility by a commission raises its own problems. But, as pointed out by the author, interference with management is one thing and regulation which holds management responsible is another. Undoubtedly the jurisdiction of regulating bodies in the future will cover many aspects to which hitherto little or no attention has been paid. There is a lamentable lack of competent accounting staffs in many state commissions; their expansion and improvement is especially necessary these days in order to work out "operating cost standards or 'yardsticks' that can be applied to private and government utilities alike" (p. 79). Finally, and this is to be expected from a college professor, the recommendation is made that the commissions be equipped with research staffs, devoting their efforts to economic and business aspects of utilities. This would enable the commissions to present fuller, more reasoned reports, in place of the brief, inadequate reports so often made.

THEODORE LANG

New York University

Expenses and Profits of Limited Price Variety Chains in 1936. Malcolm P. McNair. (Boston: Harvard University, Bureau of Business Research, 1937, pp. vi, 38, $1.00.)

This is the sixth consecutive year for which the Harvard Business School has issued a bulletin on the expenses and profits of limited price variety chains. The bulletin is based on reports from 33 companies representing more than 92% of this type of business in the United States with 5,138 stores and aggregate sales of $815,000,000 in 1936. Of general interest in respect to these chains are a cost of merchandise of 63.5 %, a total cost of doing business (including interest on invested capital) of 31.5% and a net operating profit of 5%. Net gain, which includes interest on investment, other income, and net profit, is approximately 8% and the return on invested capital, 16%. This performance is the best since 1929 and in comparison with 1935, has both a slight increase in gross margin and a slight decrease in expense. A detailed analysis of this performance is given in the 26 tables which classify individual chain operations by volume of sales, number of stores, average sales per store, rate of stock turn, average sale, population of cities in which stores are located, and geographical location of stores.

On the basis of his analysis, the author states three conclusions which are here stated in detail:

"(1) Gross margin will be lower. The more definite competition with other types of retailing and the greater possibility for comparison of values will operate to reduce the initial mark-up, while the more perishable character of some of the merchandise, i.e., the increased danger of fashion obsolescence, will increase the markdowns.

"(2) The total cost of doing business will tend to be lower as a percentage of sales. Although merchandise of low unit value is supposed to sell itself primarily on a display basis, there is a certain inescapable minimum of physical work involved in manning the counters, wrapping merchandise, and making change. Where the average unit of sale is very low, the percentage relationship of this inevitable minimum of work to the retail sales value is high. Somewhere above the point of the very low average sales transaction there is an optimum size of average sale, not so large as to run seriously into the need for more salesmanship and greater knowledge of merchandise and yet high enough to escape the disadvantage just mentioned. A management which can successfully achieve approximation of this point will be able to lower the expense rate.

"(3) The net profit as a percentage of sales will probably be lower because the decrease in the total expense percentage will not be so great as the decline in gross margin. In other words, unless sales volume is substantially augmented, there will be a drop in the total dollars of net profit. The success of a policy of raising the price limit in variety chains will therefore depend principally upon the extent to which it is possible to increase sales volume by this means."

The analysis leading to these conclusions is backed by the statistical material at hand. Briefly, the author considers the low operating costs and relatively low gross margins which characterized variety chain operation until 1932 as indications of a young and expanding type of chain. At the present time, maturity is probably reached. Intensive instead of extensive development of the market is necessary for further growth. This growth will occur through handling higher priced items in the

apparel and accessories fields. The gross margin on these items because of competition and mark-downs will be less than on regular 5 cent and 10 cent merchandise. The result will be a lower gross margin.

The total cost of doing business will decline because the unit of sale will be larger. The variety chains handling higher priced merchandise had, in 1936, considerably lower operating costs than the strictly 5 cent and 10 cent chains. They, also, had a lower gross margin, with the result that their net profits were slightly less.

The implications of the analysis are rather pessimistic. Gross margin will be lower while expenses may be expected to mount. Moreover, the gross margin of variety chains is now sufficiently large (35%) to invite competition from new forms of low cost competition which may be exemplified by the super markets in the grocery field. Such competition may place the variety chains in the same defensive position as department stores and independent grocers at the present time.

The reviewer recognizes the probability of the adverse trend suggested by the analysis. However, he does not anticipate any immediate decline in the profits of variety chains nor does he expect their profits in 1937 to be less than in 1936. The new forms of competition which may attack the variety chains are not yet in evidence and increased costs are so wide spread as to affect all types of retail stores regardless of their maturity. Gross margins may be expected to increase as an off-set to social security taxes and minimum wage an hour laws and other regulations that place inescapable costs upon all retail businesses.

E. H. Gault

University of Michigan

One Hundred Short Problems in Corporation Finance. Herbert E. Dougal, Ernst A. Dauer. (New York: The Ronald Press Co., 1937, 78 pp. $.75.)

In the introduction to "One Hundred Short Problems in Corporation Finance," the authors state: "These problems are designed as supplementary exercises in courses in corporation finance. They are not of the 'case' type. Their purpose is to serve as illustrations of financial principles." This purpose, and the additional objectives of acquainting the students with the terminology of corporation finance and giving them familiarity with sources of financial information and data, are admirably served by this compilation of problems. Avoidance of the case or "issue" type of problems results, in the reviewer's opinion, in loss of emphasis upon the conflict of individual interests which appears so strongly in many of the financial problems of corporations and which in classroom discussion contributes to the realism of the situations under consideration. The problems themselves relate both to actual corporations and hypothetical situations and give the beginning student a realistic contact with the content of this field.

The hundred problems appear in the form of a 78-page planographed pamphlet and an accompanying key of 58 pages. Such a compilation must necessarily be confined within a limited scope. Following the usual textbook treatment of corporate finance, the present volume excludes the financial markets generally (aside from privileged subscriptions and the mechanism of security flotations) and the so-called moneyed and governmental corporations. Within the field covered, one may note the omission of material concerning the relation of the bank loan to corporate finance. The troublesome problem of the treatment of unamortized bond interest in bond conversions is not directly illustrated. Real-estate mortgages and equipment-trust financing are illustrated by a single problem for each. Although this appears to be an adequate allowance for these topics within the outline covered by the book, the reviewer felt that more searching problems might have been used in each instance to bring out a greater number of the questions involved.

The opening section deals with the partnership and other non-corporate forms of business organization, raising the question of the legal liabilities involved. The basic problems of the corporate form follow, with emphasis upon the position of the stockholder and upon the different types of stocks. The third section deals with "Bonds and Borrowing." The complexity of the subject covered in this section is obvious, and one has only to attempt the selection of problems in the field to appreciate the difficulty of presenting such material by the case method. The problems used promise to supply an effective drill in both principles and terminology. Twenty-three are given covering questions of terminology, classification, priorities, refunding, sinking funds, and conversion.

Promotion is covered in four problems, involving both financial and nonfinancial aspects. Numerical data which could be used to illustrate the usual calculation of the amount of money needed to start an enterprise are not included, although in the following section on "Capitalization and Financial Planning" and under "Current Financing" certain of the problems involve the estimation of capital requirements. In the former section the illustrations of capital structures are effective in bringing out the differences among different industries.

The six problems presented under the title "Marketing of Securities" show most effectively present underwriting practices and the matter of privileged subscriptions. Under "Current Financing" four problems are presented dealing with measurment and fluctuations of working capital and the factors determining its amount. One problem upon the estimation of working capital requirements for a specific business concern is included.

"Determination and Distribution of Net Income" is covered very fully in 12 problems, an emphasis well warranted by the importance of the questions raised by present-day conditions. The influence of legislation taxing undivided profits is not illustrated, though expansion out of earnings is touched upon in this section. "Corporate Expansion and Consolidation" is dealt with in four problems covering industrial consolidation and merger, holding company organization with emphasis upon "trading on the equity," and an interesting problem on the use of the lease in railroad combinations.

"Recapitalization and Reorganization" are combined in a single section. Under the first topic, the problems

cover changes in the nominal value of stock, elimination of preferred dividend accumulation, and industrial recapitalization. Reorganization is illustrated from the public utility, railroad, and industrial field.

The "One Hundred Problems" will unquestionably prove useful to instructors in the field of corporate finance, even though the point of view of the instructor or the adjustment of the finance course to the content of allied courses in a given institution may necessitate additional illustrative material. Within the scope of 100 problems, wider coverage than that actually attained by the authors would doubtless result in undue dilution. The bibliography furnished in the key for the main part supplies references to portions of standard texts having bearing upon the question under consideration. The large number of texts cited is of advantage in meeting the problem of adjusting references to the books available in a given library.

Joseph B. Hubbard

Harvard University
Graduate School of Business Administration

An Index to Business Indices. Donald H. Davenport and Frances V. Scott. (Chicago: Business Publications, Inc., 1937, pp. viii, 187. $3.00.)

Because of the immense amount of figures being gathered which reflect current changes in various aspects of business throughout the United States, a need has been felt for a guide which would give ready access to important index numbers and other statistical indices of business. This book has as its purpose both to make manageable the vast amount of material available and to lend some amount of standardization to this material which has been dealt with in unstandardized terminology.

The first part, on Finding the Index, is in three sections devoted to (1) commodity prices, (2) security prices, and (3) other prices, including general indices of business activity and those relating to production, distribution, labor, and finance.

The second part classifies and describes the various index numbers and indices. It contains all published series which the authors consider generally significant for the analysis of current business conditions. Series compiled only on an annual basis, not kept up-to-date, or not generally available to the public are not included. Only when regional figures have been compiled as subgroups of a national total have they fallen within the scope of the volume. The latest available description of each index has been given, often with the coöperation of the compiler. Practicing accountants who need to keep track of the activities of commodity and security prices, as well as general business conditions, and teachers and students who want leads for research materials should find this volume to be of much assistance.

Arthur W. Hanson

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Studies in the Theory of International Trade. Jacob Viner. (New York: Harper & Bros., 1937, pp. xv, 650. $4.50.)

Dr. Viner does not consider "This book . . . as a rival to, or substitute for, the excellent text books on the theory of international trade which are at last available." Rather, it has been his purpose to " . . . resurrect forgotten or overlooked material worthy of resurrection, to trace the origin and development of the doctrines which were later to become familiar, and to examine the claims to acceptance of similar doctrine." To these ends nine chapters, a note on scope and method, and an excellent bibliography are developed.

Much of the material in this treatise will be found highly valuable to students who are not primarily interested in the theory of international trade, for there is a real contribution to the development of economic thought, and much material of great value to students of monetary theory. Indeed, it is not too much to say that Dr. Viner has made contributions in three directions rather than the one indicated by the title. The first two chapters relate to "English Theories of Foreign Trade Before Adam Smith." Here one finds interesting quotations from " . . . writings antedating Locke by some forty to ninety years which present some form of the quantity theory of the value of money." Here also it is brought out that the mercantilist argument that a favorable balance of trade stimulated employment in England, " . . . withstood criticism most successfully . . . ," and much more of great value.

Very little of the relevant literature has escaped the minute and critical attention of Dr. Viner and the more important of the recent contributions are carefully examined in the light of the author's comprehensive grasp of source material. Attention is called to the mysterious failure of Adam Smith, who was so well acquainted with Hume and his writings, to refer, in *The Wealth of Nations*, to the self-regulating mechanism in terms of price-levels and trade balances . . . ." Dr. Viner has been able to find but four English writers before Adam Smith who " . . . seem really to have been free traders" and he feels that he has been able to show " . . . that all of the important elements in Adam Smith's free-trade doctrine had been presented prior to the *Wealth of Nations*."

Chapters III and IV are devoted to "The Bullionist Controversies." First the inflationist phase is taken up and then the deflationist. These are of particular value to all students of money even though they contain occasional detours of critical comment upon the work of other writers such as Silberling and Angell. Thus Dr. Viner asserts that "Although all of the prominent members of the classical school were adherents of a fixed metallic standard, I have not been able to find any serious attempt during this period to meet . . . claims that a better currency standard was available." Only one instance is found " . . . of even a bare mention by a bullionist of instability of the exchanges as an evil in itself."

"English Currency Controversies, 1825 to 1865" is the subject of Chapter V. Here one finds an excellent discussion of the "Currency School"-"Banking School"

Controversy. Dr. Viner is forced to conclude, from the evidence available, " . . . that from about 1800 to 1860 the Bank of England almost continuously displayed an inexcusable degree of incompetence or unwillingness to fulfill the requirements . . . of a central bank." The author then passes to "The International Mechanism Under a Simple Specie Currency." Careful attention is given to the contention of Ohlin and others that a shift of demand resulting from a shift in the balance of trade, will of itself contribute to an adjustment of the balance of payments to remittances and that this idea has been overlooked by writers from Hume on down. Dr. Viner is unable to accept this contention and supports his position with a careful analysis of the leading writers.

In Chapter VII, the author considers "The International Mechanism in Relation to Modern Banking Processes" and presents a valuable discussion of automatic vs. managed currencies. Incidentally, Angell's criticism of his work on "Canada's Balance" is taken up and Dr. Viner defends his original position, fortified by a reexamination of the statistical data growing out of Canada's experience. The doctrine of comparative costs is taken up in Chapter VIII. Here the work of Graham comes in for a critical examination and Dr. Viner finds it important to emphasize " . . . that the doctrine of comparative costs has for most of its exponents derived its cogency from their acceptance of a real-cost theory of value which was not simply a labor-cost theory of value, even when expressed in its terms." He agrees with Taussig " . . . that the existence of differences in wages does not suffice to overturn the doctrine of comparative costs."

"Gains from Trade: The Maximization of Real Income" is the subject of the final Chapter, IX. It is asserted that "Free trade . . . always makes more commodities available, and, unless it results in an impairment of the distribution of real income substantial enough to offset the increase in quantity of goods available, . . . always operates to . . . increase the real national income." There follows an examination of the more elaborate methods of analysis of the income gains from trade as worked out by J. S. Mill, Marshall, Edgeworth and others. Graham comes in for more criticism here. But it should be said that, while Dr. Viner is a rather severe critic of the work of others in this field, he is equally generous in acknowledging the contributions of those whom he criticises.

This treatise is the sort of thing which a teacher or specialist in foreign trade should consult. It is also highly valuable for graduate students, but in the main it is the work of an economist for economists who have a special knowledge of the subject. Dr. Viner gives repeated evidence of the reverence in which he holds his old teacher, Dr. Taussig, even where he mildly differs with him. This reviewer does not hesitate to commend the book as one which will repay reading and rereading and much careful reflection, for it is clearly a distinct addition to the literature on the subject. There will be some disagreement with certain conclusions of the author on the part of those who are perhaps equally well versed in the subject, including those whom he criticizes, but from this there should emerge some further contributions which, it is to be hoped, will eventually trickle through to those who control the economic policies of the nation.

E. A. Kincaid

University of Virginia

Money, Credit and Finance. G. F. Luthringer, J. G. Smith, and D. C. Cline. (Boston: Little, Brown & Company, 1937. pp. x, 533. $1.40.)

This volume is the third in the Princeton series on Economics and Social Institutions. Dr. Smith, in the preface, states that it is directed to an analysis of the modern economic system in its financial aspects, but apparently only in an introductory manner. The twenty-five chapters fall into four sections of which the last relates to Public Finance. This arrangement may prevent the book from being used as a text in some instances, but since taxation is so closely related to monetary problems in a period of deficit financing that the idea has its advantages.

Part I is a clearly presented statement of fundamentals distinguished by a good treatment of the "Nature of Credit" and the place of "Credit in the Modern Economy." Part II has four chapters on "The Money and Credit System" in the course of which some points overlooked in most texts are clearly brought out. Thus, the effect of intercommunity trade upon bankers' balance is explained. (p. 154–55) There is also an excellent chapter on "Commercial Banking and the Capital Market" in which it is said that " . . . the investment banking fraternity had come to be infested with adventurers having the business ethics of financial alley cats." Here also it is said that " . . . the private association, epitomized in the New York Stock exchange, was not a worthy guardian of the free capital market." (p. 236) In the chapter on "Problem of Financial Reform" it is asked "if . . . there should develop a highly integrated national credit monopoly under the control of interrelated clearing houses (serving as the trade association of the banks) will it not be necessary for the government to virtually fix the prices of banking service as it now does in the case of railroads and public utilities?" A very significant question indeed.

Part III deals with "Monetary Theory" in seven chapters. It is the work of Dr. Luthringer and he must be given credit for an excellent discussion. An instance of vitalizing material is the remark (p. 330) that velocity of money in Germany between 1919 and 1923 " . . . increased from 49 to 2,538, or about fifty-fold, which together with the increase of M, accounts for the tremendous increase in prices." It should be said that the quantity theory is well presented and the section is further strengthened very materially by the chapter. "The International Gold Standard," wherein the balance of payments is presented in such a way as to make it clear that the gold standard was an international standard. In the discussion of the "Managed Standard" it is pointed out that "The coordination of this divided authority over the monetary system will undoubtedly be a serious problem." It is unfortunate that this timely remark could not have been expanded into a full discussion.

Part IV considers "Public Finance" in eight chapters. Here it is remarked that " . . . the most significant

change has been in the nature and direction of government activities rather than in their scope." The principle forms of taxation are as well presented as space will permit and it is certain that the present-day university student cannot be too well informed on these. In the discussion of "Limitations on Expansion of Public Debts," the authors lost an opportunity to hit the nail squarely on the head. What is said is good so far as it goes, but the menace of the growing indifference about the accumulation of debt could have been dealt with much more frankly and directly.

Taking the volume as a whole it has much to commend and little to criticize. The authors are clearly fully abreast of the times and they write well. The book makes interesting reading and it is not too technical for beginners, even though economic fundamentals are not slighted. If criticism were made it would relate more to what is not said rather than to what is said. Consequently it is to be hoped that this book will be so well received that the authors will see fit to write another and fuller treatment sometime in the future.

E. A. Kincaid

University of Virginia

Exchange Depreciation. Its Theory and Its History, 1931–1935, with Some Consideration of Related Domestic Policies. Harvard Economic Studies, Volume LIII. (Cambridge: Harvard University Press, 1936, pp. xxix, 516. $5.00.)

Dr. Harris states that "The aim of the study is to draw some conclusions of general validity for the problem of depreciation and also to consider carefully the economic developments in the years 1931–35 to be associated with depreciation." In the latter connection he refers to the possibility of a continuation of the policies of 1931–35, "If, . . . the economic system retains the rigidities of recent years, and if economic forces tend to introduce further deflationary movements." The study is developed in sixteen chapters which fall into four parts.

Part I, "Mainly Theoretical," starts off with the statement that "The beneficial effects of depreciation . . . are a valid conclusion—from the available evidence for this period . . . ." Indeed, Chapter I is more in the nature of a statement of theoretical conclusions, to be verified by subsequent analysis, than a beginning of the usual sort. And the same may be said of Chapter II. After all the method has much to commend it, since the governing principles within which empirical considerations must play, are laid bare. Thus, it is pointed out that "A country with depreciated exchanges suffers in that it is likely to offer goods under less favorable terms in the first instance; but the extent to which its terms of trade will become adverse depends upon elasticity of demand at home and abroad." As for the effect of exchange depreciation upon internal prices, "Many who argue for (it) frequently miss (the) point. That the farmers can get a larger amount from the consumer for wheat and cotton may make it more difficult to force the consumer to pay out more or even maintain his expenditures for milk and pork." It is also made clear that " . . . the competitive gains from depreciation were greater for Great Britain than for agricultural countries or than for the United States," because there were fewer countries off gold when sterling was first depreciated. Another vital point—why did not the prices of imports rise by the full extent of depreciation? One must consider the number of countries off gold, the effects of exchange depreciation upon gold prices must be considered along with the tendency to raise national prices, the concept of gold prices must also be used with care when some countries resort to restrictions upon the force of gold as a standard, and allowance must be made for the tendency for gold prices to decline with the growth of the degree of depreciation.

Part II, "Statistical," provides the second main approach of the author to the problems of exchange depreciation. The fact that both the theoretical and the statistical approaches are employed adds much to the value of the treatise, since one can be checked to some extent against the other. Here it is brought out that " . . . a rise of income in countries off gold may weight more heavily than the less favorable prices (relatively to price levels) at which commodities are offered to other paper countries than to gold countries." (p. 131) So far as trade statistics are concerned, "The first effect of depreciation is a reduction in imports. Later, an improvement in the economic situation, that in general accompanies depreciation, tends to offset the restrictive effects of the higher prices." As for the prices, it is found that " . . . prices have risen most where exchange depreciation has been greatest. . . . depreciation seems to have improved the competitive position of countries in so far as it has countributed to a decline in the cost of living relatively to the level of wholesale prices."

Passing to production, the analysis of data indicates that " . . . with depreciation the economic position of countries off gold improved relatively to that of others. . . . The evidence is overwhelming that countries off gold captured a larger part of the world's production. It is also quite clear that their gains were more largely in domestic than in foreign markets." In taking up "Prices and Expenditures," the author considers the failure of prices to rise markedly in view of the outlay of Federal funds. Why have prices not risen further? Among the factors involved are the continued operation of deflationary forces, the fact that 8 billions of the 18 billions appropriated for emergency expenditures, by the middle of 1935, were still unexpended at that time. Moreover, only 82% of the reported Federal deficit over a period of almost three years had been net income-increasing expenditures. Also, other governmental agencies had reduced their relief expenditures as the Federal government expanded its own. Again, the deficits incurred do not loom large when compared to the normal outlay for construction. Finally, competition for factors of production has little effect so long as they exist in relatively large amounts as under-employed or idle.

One of the most significant sections of the entire volume appears at this point. (p. 213) Here it is explained that " . . . a catastrophic rise in commodity prices, which is the chief characteristic of inflation, may follow should the banks not continue their support of the government bond markets as the Treasury is

forced to borrow in order to finance its ever recurring deficits. . . . If desertion by investors makes necessary purchases of bonds by reserve banks . . . reserves are increased by a corresponding amount." It would seem to follow that the dollar should not have been tied to a definite weight of gold when it was and the other artificial barriers to a normal rate of interest for government loans should have been avoided in so far as possible. There is much more of vital interest in Part III, "The American Episode, 1933–35," but it is not possible to develop it here. The same may be said of Part IV, "The British Episode," especially its chapter on the Exchange Equalization Fund.

Indeed, the whole volume will well repay the painstaking study which its close analysis requires. It is not too much to say that this volume is the most exhaustive investigation of exchange depreciation that has been made and it may be added that it is the best piece of work that Mr. Harris has so far done, and I do not except his vast labors on the Federal Reserve System. The value of the treatise is enhanced by the fact that the ramifications of exchange depreciation carry the author far into the intricate nature of our modern economic system and its workings and the analysis of exchange depreciation becomes the medium of exposing to the eye of the student much that is exceptionally valuable in addition to exchange depreciation *per se*. The volume is fully documented, fortunately, for here is much additional material. Moreover there are many tables and charts which bolster the statistical approach and an appendix showing the sources used in constructing them.

E. A. Kincaid

University of Virginia

La Formation et l'Expansion de la Comptabilite' à partie double. (The Formation and Expansion of Double-entry Bookkeeping.) Raymond de Roover. (Paris: Librairie Armand Colin, 1937, 52 pp.)

In this small monograph the author tells the story of the origins of commercial and industrial bookkeeping in the middle ages and the gradual spread of double entry throughout Europe. The size of the work is deceptive, for it is no hasty survey but a compact and scholarly marshaling of the facts.

The work is especially illuminating on a number of points which have been but poorly understood heretofore. For example, the expressed opinions of economic historians that merchants in the middle ages were illiterate and that their accounts were incomprehensible jumbles is deftly refuted by showing the real significance of seemingly unrelated memoranda which could not have been prepared by, or under the direction of, truly illiterate men.

Single entry has usually been taken to mean merely keeping accounts with persons for debts payable or receivable. But the author shows that commercial records before double entry were much more extensive and useful than this. By the use of numerous separate memorandum books, each with its own data and purpose, most of the classification of facts necessary for control purposes was obtained long before the recording of transactions in the compressed fashion of double entry had simplified the process.

An accountant once was called in by a client to improve his records system. As he told the story, he found all of the essential facts already carefully recorded in various books; all he had to do was "tie them together." One gets the impression from Mr. de Roover's study that systematic double entry became a reality in the same manner when the pre-existing elements were finally co-ordinated by a unifying thread of common purpose: that of subjecting the money prices of all transactions to the arithmetic test of the trial balance.

Many people who are steeped in the Pacioloan tradition will be astonished to learn here that industrial or manufacturing records were an integral part of practice along with mercantile or trading records. It now seems that we could easily have suspected such to have been the case, for fabrication was, of course, co-incident with trade throughout the middle ages, and if the problems of merchandising stimulated the design of records helpful to the trader, there was an equal pressure of practical problems upon the manufacturer of cloth to design helpful records for himself.

There was, of course, no factory overhead involved in the put-out system of hand production in the home. But there were obvious problems of wages paid to various artisans, of quantities and costs of raw materials, of wastage and spoilage, of different types and grades of finished goods: nearly everything but machine-burden. These managerial problems, before double entry, were met by the same methods that served traders, namely, separate record books for various different facts.

The mystery is: What became of these ideas when bookkeeping practice was reduced to printed texts? Was the impulse to imitate, or plagiarize, Paciolo so great that his omission to describe industrial accounts lost them to view until nineteenth century conditions fanned the meager embers?

The author also shows that financial statements as a basis for division of profits, taxation, partnership dissolution, etc. were much more common before the sixteenth century than generally supposed. These were, of course, "inventories" in the broad sense of the word; but it should be noted that equipment was often appraised by experts—who, incidentally, recognized wear and tear—and merchandise was usually priced at cost of acquisition.

Indeed the more of bookkeeping history that is uncovered, the more the conviction grows that we moderns have added woefully little to the early foundations.

The monograph is strongly documented throughout and the author is obviously well read in the results of European research, old and new—and there is much that is very new, especially in regard to the Datini documents and the Medici manuscripts. It is clear, too, that he is well oriented in the original sources by his own research over a period of years.

It is to students with this antiquarian bent, who are also well equipped with a knowledge of several European languages, that most of us here must look for a true perspective of the development of bookkeeping. For an art so old, we know painfully little.

Now that Mr. de Roover has come to make his home in this country, it is hoped that he will find that our publishers also are interested in accounting history.

A. C. Littleton

University of Illinois

The Common Stock Theory of Investment. Its Development and Significance. Chelcie C. Bosland. (New York: The Ronald Press Co., 1937, pp. ix, 154. $2.50.)

Dr. Bosland presents a summary of " . . . the findings, methods, and assumptions of all . . . important factual investigations, some of which resulted favorably and some unfavorably to common stock. An analysis of the methods employed, reasons advanced, and the conflict of evidence . . . the bearing of all these findings upon present day investment problems . . . with particular emphasis upon challenging questions concerning underlying economic developments in the United States during the post-war period." The complexity of the undertaking is indicated by reference to "The shrinkage of about 84 per cent in common stock values in less than three years . . . " a shrinkage "so severe that the speculative nature of common stock purchases would seem to have been established beyond question. By June 1936 part of that loss had been recovered, and the decline from the 1929 peak was reduced to 46 per cent." And yet, " . . . it now seems clear that even after the catastrophic decline during those three years, there was a strong undercurrent of interest and even confidence in common stocks."

Chapter 2 deals with the question, "What is the Common Stock Theory of Investment?" The answer involves an analysis of "Common Stock as a Long Term Investment."[1] Chapter 3 continues the discussion under the title, "Evidences of the Merits of Common Stocks." Here Dr. Bosland remarks that Smith "... failed to prove the second part of his thesis, although the first part was definitely established." Van Strum's comparisons[2] are taken up and also the study of Rose[3] as well as that by Jackson.[4] In Chapter 4, the author considers "Common Stocks and the Depression." Here he examines the continuation of Smith's first test from December 1922 to December 1931 and finds the outcome favorable to the common stock theory. The continuation of Van Strum's comparisons down to June 30, 1931, also seems to confirm the theory. Harold's continuation[5] of three of Smith's tests down to the end of 1932, indicates that " . . . in every case the excess income received on the stock fund much more than compensated for the loss of principal." From Rodkey's study[6] of preferred stocks the conclusion is drawn that " . . . whatever made the preferred stocks in these corporations satisfactory investment over the (stated) period, made the common stocks even more profitable." The author's final conclusion on these studies is that "The results of common stock investments, as revealed in these studies, seems to present overwhelming evidence of the profitability of the long-term commitment of funds to the equities of leading American corporations."

In Chapter 5, "Contrary Evidence" is taken up and here the work of Chamberlain and Hay[7] receives very inadequate attention while the study of Kellogg and Kilbourne[8] is much more fully considered and its deficiencies are brought out. Dr. Bosland preserves a judicial poise throughout his work and gives careful attention to the findings that are both favorable and unfavorable to the common stock theory. Thus, it is pointed out that "About all that one can conclude from these tests is that no single rule-of-thumb method of selection is likely to prove superior." In the discussion of "Factors Causing Growth of Values," Chapter 7, Dr. Bosland refers to the agreement of Rose with Smith that the "compounding effect of the reinvested earnings" is the key to the mystery of increasing stock values. But attention is also called to the failure of these studies to ". . . attempt to establish the relationship between increasing stock values and the one factor which gives stock any value—that is past, present, and prospective earnings." In his examination of this omission the author concludes that ". . . there was a tendency for stock prices to correspond to corporate profits although their rates of growth were not exactly the same."

The "Analysis of Causes" of increasing stock values is the subject of Chapter 8. Here one is referred to the criticisms of Chamberlain and Hay but there is no analysis of their views. Nor, is there reference to Graham and Dodd, and it is not easy to excuse the inadequate or lacking consideration given to the work of four such dependable students. However that may be, neither falling prices nor stable prices weakened the case for the common stock theory in the post-war period. As for the effect of interest rates, available data are inadequate. Reinvested earnings may be considered a contributing factor to increasing stock values, "... *given large earning power which is not diminished by unwise or unprofitable expansion.*" It is concluded here that the investor should be careful to consider the limitations of past studies.

Chapter 9 considers the "Relation of Causes to Present Investment Policy." It is observed that the nations of the world seem to be determined to prevent drastic declines in commodity prices. Also, that there is no proof to show that the declining rate of population growth has had or will have a seriously adverse effect upon stock prices in general. Moreover, the students of stock values have failed to emphasize the relation of growth of stock values to the growth of industry and

[1] Edgar L. Smith. (Macmillan)

[2] Kenneth F. Van Strum, *Investing in Purchasing Power.* (Barron's)

[3] Dwight C. Rose, *A Scientific Approach to Investment Management.* (Harper)

[4] J. A. Jackson, "Common and Preferred Stocks as Investments," *Journal of Business*, Univ. of Chicago, Vol. 1, pp. 294–323; 397–416.

[5] Gilbert Harold, "A Reconsideration of the Common Stock Theory," *Journal of Business*, January 1934, p. 42 ff.

[6] A. G. Rodkey, "Preferred Stocks as Long Term Investments," *Mich. Business Studies*, Vol. iv, No. 3.

[7] *Investment and Speculation.* (Holt)

[8] "Bonds Generally More Satisfactory than Stocks as Long-Term Investments," *Annalist*, Feb. 9, 1934, p. 259.

trade. This failure is considered most significant, particularly in view of the evidence that our major industries are "growing-up." Dr. Bosland feels, however, that while the current trend in American industry is upward at a decreasing rate (p. 80), the prediction of trends is unwise and likely to be inaccurate. Undoubtedly this and the following are the most valuable chapters in the book, for the subject is continued. Dr. Bosland here asserts that it is not possible to ignore the fact that capacity of industry was somewhat in excess of requirements in the period from 1900 to 1930. In addition he finds that while the presence of excessive competition was not a factor adverse to common stocks, the period covered by available studies was too short for any assurance on this point.

"Profits Trends of Select Corporations" is the subject of Chapter 11. As the result of his own studies, Dr. Bosland concludes that "There is little evidence that these industries individually or as a whole, have suffered from the unprofitable operations which accompany overbuilt capacity, stagnant markets and excessive competition." In the following chapter, "Some Observations," it is said that "The ability of a diversified list of representative common stocks to withstand the effects of a long period of falling prices, while seemingly proved in the studies of Smith and Van Strum, does not appear to be conclusively proved." Moreover, ". . . any attempt to apply the results of past investigations to the future must assume that we continue to operate under an economic system in which private ownership of the instruments of production and the private profit incentive remain dominant." In view of the uncertainties as to the future the author does well to stress the low price earnings ratios which prevailed when the earlier empirical studies of common stocks were made. The situation had so changed by 1936 that it seemed that stock purchasers ". . . were willing to purchase common stocks on which the earnings yield was about what has long been considered a reasonable return on a medium grade bond investment." In view of this fact, how much of the price of a stock is a discount of the earnings trend in the remote future?

Dr. Bosland has performed a real service in assembling and analyzing the literature that has grown up around the common stock theory of investment. On the whole he has done the thing thoroughly and dispassionately. His conclusions are, therefore all the more valuable and they are wise and thoughtful conclusions.

E. A. Kincaid

University of Virginia

The Value of Money. B. M. Anderson, Jr. (New York: Richard R. Smith, 1936, pp. xxviii, 610.)

Except for the foreword by Dr. Benjamin Haggott Beckhart and the change of publisher, there appears to be no difference whatever between this edition and that of 1917. According to Dr. Beckhart, this volume ". . . represented the blazing of pioneer trails at a time of widespread acceptance of naive doctrines that credit was but a substitute for money . . . " and it was ". . . a notable attempt to bring about a much needed unification of value and monetary theories." These references are to what the book was. There is no reference to the fact that much progress has been made towards accomplishing this same task since 1917 and there is nothing in the present edition that indicates an awareness of the progress made. This is most unfortunate, for the field of "institutionalism" has been much cultivated since Dr. Anderson made his contribution, to say nothing about the excellent work of Robertson, Hawtrey, Keynes and others on money. It is, nevertheless, good that another edition has appeared for it serves to remind one of the fact that Dr. Anderson's work still compares favorably with the best contributions of American writers on money for its originality, vigor and critical analysis. Doubtless he did much to place the quantity theory of money on a more secure, if much altered, footing.

Dr. Anderson's "Social Value" more fully formulates the value philosophy that characterizes this book. Here it is summarized in one chapter. But there is no reference to Dr. Common's "Institutional Economics," of course, though there are passages which tend to give the impression that "social" value and "institutional" value have much in common, even if they are not identical as to content. Thus Anderson's remarks at pp. 19–20 have much the same content as those of Commons, pp. 107–8, and there are other instances of the same sort.

There are excellent chapters on the various theories of value in their monetary connection. Indeed, there is no other American treatise on money where this task has been so well done. Of these the best is that on "Marginal Utility and the Value of Money," Chapter V. Here Dr. Anderson concludes that ". . . the marginal utility theory has not solved the value of money." But he appends to this excellent discussion a long note of critical comment on various writings and leaves the reader half convinced that Prof. Perry (p. 118) has more of the truth in his conception of value than does Dr. Anderson. The same might be said of Davenport. Indeed, it is conceivable that there is some part of the explanation of value that lies in between or on the borderline of their respective conceptions, but of no great significance.

Part II takes up "The Quantity Theory" in Chapters VI to XIX, inclusive. This is the heart of the work. Here Dr. Anderson asserts that Fisher's "Purchasing Power of Money" ". . . falls with this proposition, towit, that M controls M′, and that there is a fixed ratio between them." This challenge once had youth and vitality, but monetary theory has gone far since then and such a statement is no longer striking. Dr. Anderson had, in 1917, the same difficulty that Mitchell had later in ascertaining the meaning of such terms as "normal" and "transitional" as used by Fisher.[1] Chapter XIII, treats of trade and speculation with an effectiveness that gives it as much significance and value as it had twenty years ago. There is also much of current significance in "The Rediscovery of a Buried City" where it is effectively contended ". . . that deposits made in banks very greatly overcount trade." (p. 364)

[1] Mitchell, W. C., *Business Cycles: the Problem and Its Setting*, pp. 128–139.

Part III, Chapters XX to XXV, considers "The Value of Money." Here Dr. Anderson admits his debt to Menger and Carlile, but he succeeds in presenting a very able and convincing analysis of how "... money tends to develop out of a barter economy."[3] Here he brings out the additions to the value of money made by its functions and of particular interest is the analysis of the "bearer of options" function, which arises from dynamic change. Indeed, "*This is the dynamic function* of money *par excellence*." The chapter, XXIII, on "Credit" is undoubtedly about the most satisfactory treatment available. This reviewer knows of nothing more satisfactory from the pen of any American writer. Thus, "the chief reason for bank-credit is to enable economic society to readjust itself quickly and readily to dynamic changes. . . ." Moreover Dr. Anderson comes very close to the actual truth today when he says "... that the extent to which bank-credit serves for ermanently financing industry is underrated." (p. 523) Again, one is reminded of Keynes' liquidity preference concept when Dr. Anderson says, "If . . . all forms of wealth could be made equally saleable, we should have interest rising for those loans and securities which now have highest saleability."

In conclusion, it is quite possible to agree with Ellis when he refers to Dr. Anderson's work as "... the only outstanding American work upon the nature of monetary value. . . ." But Ellis goes on to say that the work falls into confusion. "Does B. M. Anderson mean by the *Value of Money* its purchasing power? Anderson would certainly respond negatively, yet the whole of the work is an ad hominem attack upon the quantity theory as represented by Fisher, whose book significantly bears the title of *The Purchasing Power of Money*. ... Anderson seems to me ... to surrender Social Value as anything distinct from purchasing power. Making the fatal concession that Social Value includes the latter, he really allows purchasing power to gobble up Social Value. . . . Aside from contributing to the development of the quantity theory by a brilliant and minute criticism, the whole work spends itself in labyrinthian wanderings among conflicting concepts of the value of money." Here is the appraisal which one brilliant student of money makes of the work of another. Personally, I do not fully agree, for Anderson may *appear* to have been wandering. If so, he was at the same time striving after some more satisfactory theory of the value of money than had so far been evolved. If he had continued his academic career, some of the obscurities referred to by Ellis might have been cleared up, for Dr. Anderson had great potentialities as a theorist and there was and is great need for his continued services in this field.

E. A. KINCAID

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Audit Working Papers. Maurice E. Peloubet. (New York: American Institute Publishing Co. Inc., 1937. pp. xii, 412. $4.00.)

This book succeeds J. Hugh Jackson's book of the same name, which, along with Palmer and Bell's "Accountants' Working Papers," pioneered the way in 1923 by presenting for the first time in any generally circulated reference book, a substantially complete set of working papers which was representative of good current practice. The differences between the two works show clearly the complexities which have grown into accounting practice these last fifteen years and the consequent need which has arisen to develop adequate mechanical devices to record the details of audit work done in such a manner as to make them readily available for the several uses to which they are now commonly put. Jackson's book, reflecting its time of publication, told a comparatively simple, straight-forward story. In spite of Mr. Peloubet's gift for lucidity the new book will be much more difficult for students to grasp.

After starting out for two chapters much as did Dean Jackson, Mr. Peloubet first deals with the "Examination into System of Internal Control and Audit." He gives two splendid examples of forms used in practice for this particular aspect of the work. Unless such a job is done early in the audit, how can one know whether conditions require more or less than a typical balance-sheet audit?

Chapter IV is entitled "Classification of Trial Balances for Preparation of Reports and Statements." It deals with the form and arrangement of working trial-balances and shows a decided preference for the "horizontal" method of distribution—that is, "a statement which provides a column for the trial balance and columns for each individual balance-sheet classification on one statement, and for each income—account classification on another." The classification of accounts being horizontal, adjustments can be made below without limit, thus adding greatly to the flexibility of the statement. "As only one adjusting entry is placed on one line, each entry is self-balancing, and the component parts of each are clearly evident. A compound entry with ten credits and one debit presents no more difficulty than a simple entry of two items. Each column is, in effect, a summary of accounts which make up that item, although in some cases it is desirable to resummarize these in greater detail for other purposes."

"It is obvious that if an incomplete trial balance is presented to the accountant, he can carry his work to the point to which the trial balance has been brought and add, without difficulty, the entries made subsequently. This features is of great importance in the preparation of consolidated accounts, since if the accounts of, say, two-thirds of the constituent companies are received, an accountant can complete his work on them and balance up to that point. Each set of accounts which is subsequently received can be totaled and balanced within a few hours. By this method it is quite possible to prepare complete consolidated accounts, with all proper adjustments and eliminations applied, within a few hours or, at most, one or two days after the trial balance of the last constituent company is received."

Chapters V to XI, inclusive, follow the pamphlet "examination of Financial Statements by Independent Accountants" in a manner which reminds one of Thornton's "Financial Examinations," and Trouant's "Fi-

[3] Ellis, H. S., *German Monetary Theory*, 105–1933, pp. 114–116.

nancial Audits," but Peloubet is always thinking of Audit Working Papers, and he is constantly referring to schedules which show how each part of the work might be presented in acceptable form.

Chapter XII gives the working papers for the audit of a hypothetical company, the Ashton Metal Products Company, and one of its subsidiaries, Fulton Railway Company, and two other hypothetical companies, the Cool-Aire Service Corporation and the Sellburk Mercantile Company, as well as the supposititious Estate of Hugh Wynne.

Chapter XIII gives the consolidated working papers for the Ashton Metal Products Company and subsidiaries which are designed to produce (1) published accounts for stockholders, (2) comprehensive report to management and (3) form 10 K as required by the Securities and Exchange Commission which are shown so that the purpose and function of the working papers may be better understood.

Chapter XIV deals with working papers for larger consolidations, Chapter XV treats of indexing and filing working papers and finally Chapter XVI explains and illustrates records and working papers for income-tax returns of individuals.

As one turns the pages of this work he gains the impression of a tremendous amount of detail all well under control. One wonders how a busy practitioner could find the time to prepare a book so free from errors. An intelligent student should derive from this book sufficient guidance to produce adequate working papers for almost any situation with which one might be confronted in the practice of auditing.

Arthur W. Hanson

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Encyclopedia of Banking and Finance. Fourth Edition Revised. Glenn G. Munn. (Cambridge: Bankers Publishing Company 1937, pp. viii, 866. $12.00.)

On account of constantly changing Federal legislation, the plan to issue this work in two volumes, the second to give law and tables subject inherently to modification, has been abandoned, and the publishers have now come forth with a revised fourth edition in one volume. In this volume recent Federal legislation has been summarized, thus saving space and expense on that which may be of merely passing interest. The present volume may be said, therefore, to be the Volume I of the original fourth edition, enriched both by the inclusion of the legal summaries and also by the inclusion of other new matter. It contains 866 pages as compared with the original 784, and it deals with over 3,600 terms as compared with over 3,500 in the original. The book serves the purpose of organizing banking and financial information for the ready reference of busy men and rarely fails one seeking information within its fields.

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La banca nell'ordinamento finanziario visconteo dai mastri del Banco Giussano, gestore della tesoreria di Piacenza: 1356–58, Tommaso Zerbi. (Università Commerciale L. Bocconi, Istituto di ricerche tecnico-commerciali, Publicazioni, Serie II, No. 1. Como: E. Cavalleri, 1935, pp. xv, 269. L.it. 30.)

Il mastro a partita doppia di una azienda mercantile del Trecento. Tommaso Zerbi. (Same series, no. 3. Como: Cavalleri, 1936, pp. xxiii, 255. L.it. 25.)

Dr. Tommaso Zerbi, who is a young professor at the Business School "L. Bocconi" in Milan, reveals himself in these first books as a promising author in the field of accounting and business history. He has made a good start on the road which was indicated by the late Fabio Besta, the most prominent Italian writer on accounting. Besta was one of the first to realize the full value of account books, not only for the study of the history of bookkeeping, but also for the broader subject, namely, the organization and evolution of business enterprise in past centuries. Professor Zerbi is entering this new field at the right moment, as there seems to be a growing interest in the subject, both in America and in Europe.

The first book deals with the activity of a small local banker named Giussano, who combined the management of his bank with the functions of treasurer of the city of Piacenza and of tax collector on behalf of the ruling government in Milan. Zerbi has succeeded in giving us a very detailed picture of Giussano's business, based on two ledgers which cover a period extending from 1356 to 1358. As these ledgers represent only a small part of the original records, this result is quite an achievement, because it requires, besides technical knowledge, an acute historical sense.

For the history of bookkeeping, Giussano's account books are not of exceptional interest. They are still kept in single entry, although they belong to the period which witnessed the emergence of the double-entry system. They are far more important for the information which they contain on the various aspects of a local banker's activity and the methods used by medieval public authorities in securing revenue. Of these different aspects, Zerbi has given us a thorough analysis, which embraces everything from coinage systems to the financing of a war. He has even been able to reconstruct the budget of the city of Piacenza for the year 1356–1357.

The second book is the publication of a fourteenth-century text with a short introduction. The manuscript reproduced in full is a ledger dating from 1396 and belonging to a Milanese firm, Serrainerio & Dugnano. The text is of great value, because it is the earliest known example of double-entry bookkeeping applied to private business. Still older examples of double entry are extant, but in municipal accounts and not in private ones. I refer to the Genoese registers of the "massari" (communal stewards), which go as far back as 1340.

The register published by Zerbi is kept in Latin as are the older Genoese accounts, and relates to the Barcelona agency of the firm Serrainerio & Dugnano. From a cursory examination, it appears that individual accounts are opened for each commercial venture. Transfers to profit and loss occur after the termination

of each venture. Thus we have here a very early example of venture closing.

In a short pamphlet entitled "La genesi della partita doppia," the author announces that he is planning a book on the origins of double entry. This study will be based on the material—consisting mainly of account books—which he has discovered in the archives of the Cathedral of Milan. The account books we have discussed form part of this rich collection. Zerbi is certainly well equipped for this undertaking and we await the announced book with eagerness.

RAYMOND DE ROOVER

Cambridge, Mass.

How Profitable Is Big Business? Alfred L. Bernheim, Editor. (New York: Twentieth Century Fund, Inc., 1937, pp. xvii, 201. $2.00.)

This is a small and yet a most interesting book, for its subject, the profitability of big business, is one that is particularly in the public eye at the present time. If the reader is looking for a statistical study of the earnings of business concerns of varying sizes during certain selected years, he will find it here. If, however, he expects to find any single answer to the question of whether big or small companies per se are preferable either from an operating or from an investing standpoint, he will not find the answer here. This is not a criticism but in fact an approval of the conclusions that the authors have reached. The limitations are clearly stated as follows. "This book is purely factual." "Economic judgments and suggestions for action have been rigidly excluded." Some conclusions have been given, and some implied. But the danger of misunderstanding lies not in the statements in the book but in the statements that the reader may unconsciously read into the text.

On the whole, what the study demonstrates is that for the size groups selected and for the years chosen (by far the most of the study being based on three years, 1931, 1932, and 1933) certain general statements appear true. However, these general statements must immediately be followed by qualifications pointing out that what is true for industry or business as a whole, may not at all be true for individual industries, and that even with this modification allowance must be made for the many exceptions within any industry. "On the whole" large or small corporations may be more profitable, but any student of industry knows that one may find profitable units in practically every industry in the ranks of small and of large companies. The important factor is that the ability of the management be as big as the company it is attempting to manage.

Of special interest to accountants will be the recognition in the initial chapters of the difficulty of deciding on true versus stated value of assets, on the proportion of watered stocks, and on the proper basis of comparison between companies having small and those having large amounts of borrowed capital. In this connection there is an interesting table on page 60 showing the proportions of net worth to borrowed capital for concerns of different size and indicating a very definite trend toward the use of more borrowed capital by the smaller concerns.

The statement on page 82 with regard to the payment of dividends in bad times turns attention once more to the subject of the undistributed profits tax. "The most plausible explanation of the general trend that has been discussed, is that with increasing size there comes increasing ability to pay dividends in bad years. This is evidenced by the fact that surplus and undivided profits accumulated in previous years of prosperity are a larger percentage of the total capitalization of large corporations than those of small ones."

The authors realize that no simple answer can be given to the question "Is there a most profitable size?" However, there is a conclusion drawn from the study to the effect that "large corporations that made profits made them at lower rates than the small ones, while large corporations that lost money lost at lower rates than small ones. Bigness seemed to act as a stabilization factor. It tended to keep rates of profit or loss within a narrow range. Smallness, on the other hand, seemed to be a leverage factor which tended to cause wide swings." These conclusions should certainly provide food for thought to those who have recently been blaming big business for all our ills and also to those who are very much interested in the furtherance of stability and the abolition of wide swings.

WILLIAM H. MCLEAN

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Banking and the Business Cycle. C. A. Phillips, T. F. McManus, and R. W. Nelson. (New York: The Macmillan Company, 1937, pp. xiv, 274. $2.50.)

This book first discusses the monetary, structural and equilibrium theories of the business cycle. With respect to the recent depression it lays the blame on central bank credit: the World War was the fundamental cause, but the immediate cause was bank-credit inflation. That inflation was due to two causes, namely, the creation of the Federal Reserve System which permitted a larger credit structure on the same reserves; and the mistaken policy of the Federal Reserve Board in attempting to hold the commodity index steady. Finally the authors present and defend their theory that we can moderate the severity of depressions and the exuberance of booms by (a) permitting wages to fall to the point where goods can be moved, (b) permitting interest rates to reach natural levels where capital is willing to take the risks of an entrepreneur, (c) permitting prices to reach natural levels at which demand and supply tend to meet, and (d) with such an equilibrium using central bank credit to keep business steady, directing credit so far as need be into capital goods industries.

This brief sketch is less than fair to a book which can hardly be condensed with justice. There is left in the mind of this reader the fact that the Federal Reserve System and the policy of its Board are after all local to the United States while the depression has been world-wide. It is a large order to lay so much of the blame on the Federal Reserve System and its policy. It is not easy to trace to that policy the beginnings of the depression for example in Australia.

The authors recognize the play of politics in central bank credit planning. Because of politics their theory might be difficult to work in a democracy. In view of recent experiences, and of the present power of labor unions, one doubts the feasibility of reducing wages or of favoring capital as a government policy in a severe depression.

It is a good book, worth reading.

W. Granville Meader

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Principles of Accounting. Arnold W. Johnson (New York: Farrar & Rinehart, Inc., 1937, pp. xi, 690. $4.00).

The task of reviewing a first year text in accounting principles is always of more than average difficulty. This is because, no matter what methodology the author employs, he must perforce cover much the same ground as every other author who writes a text for beginners. This is no indictment of this or any other text. In fact, it is not a fair question to raise as to whether a given text has added anything to our body of knowledge. A book may be a good text without containing a single new fact. Since, however, we are living in a form of society predicated upon, or rather dedicated to, the profit motive, a struggling author who seeks commercial publication must be able to answer certain questions to the publisher before the latter undertakes an investment in the book. The publisher wants to know whether the manuscript contains anything new, whether it presents the subject in a new manner, who would use the text, etc.; the author then tries his best to answer these questions, and usually these answers find their way into the preface, where obviously they constitute a sort of selling talk.

But enough of this cynicism. To the present reviewer, the important questions are these:

(1) What is the scope of the text? What has been included or excluded?
(2) Is there by chance anything new here, something that would set aside the book as a worth while experiment?
(3) How well has the author accomplished his aim?

The first sixteen chapters cover the fundamentals of bookkeeping technique very competently. Perhaps some instructors will find that the work can be condensed into less than one semester's work. Moreover, Prof. Johnson employs the Merchandise account which he debits and credits at cost. This, while nothing new, is perhaps an improvement over the old method of presenting a merchandise account debited for purchases at cost and credited with sales at selling price. The method here employed, however, necessitates carrying the difference between cost and selling price to an artificial Profit on Sales account. As a teaching device it is good; but the student must be told that it is contrary to practice. Why not introduce purchase and sales accounts from the very beginning? It *could* be done.

There is a lack of balance in the valuation chapters. Depreciation and obsolescence cover four chapters, but only one is devoted to valuation of assets. Certainly depreciation again looms large in modern accounting, but an expansion of this topic necessarily curtails treatment of others such as an introduction to consolidated statements, or a more adequate treatment of the principles of asset valuation. Three chapters are devoted to partnerships, and four to corporations including one chapter on bonds. The other chapters cover the voucher system, manufacturing operations, the profit and loss statement and the balance sheet, each receiving one chapter. Throughout the book, at the end of each chapter there are questions and problems.

The feature of the book seems to be the case material contained in Appendix A. Unfortunately the cases are arranged alphabetically instead of by topics. It is true that business cases like legal decisions turn upon more than a single point, and hence the author suggests their introduction towards the close of the year when the student has greater knowledge to fall back upon. However, many teachers would prefer to correlate principles and cases, and a different arrangement would therefore seem desirable. While the combination of text and cases seems most preferable, there is the danger that the cases may rapidly become out of date. This is particularly true of cases involving taxes, such as the ones cited from the decisions of the Board of Tax Appeals. These decisions are not always in conformity with best accounting principles, nor are they always consistent. However, the cases serve a valuable purpose in providing material for discussion and a freshness of appeal to the students not obtainable in any other way. With the appearance of the S.E.C. on the scene, new material should certainly be available.

In presenting his material, Prof. Johnson has employed a minimum of text and a great deal of illustrative matter. Many of the footnotes are important. Three laboratory sets are provided, including sole ownership, partnership, and corporate accounting. The material and forms for these are excellent. Altogether the work is scholarly and pedagogically sound.

Theodore Lang

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New York Laws Affecting Business Corporations, Annotated. Revised to June 7, 1937, containing amendments of the legislative session which adjourned May 7, 1937. Eighteenth Edition. (New York: United States Corporation Company, 1937, pp. xxxii, 520, $2.)

This eighteenth edition, as those which have preceded it, contains the sections of the various laws which relate to New York corporations—as Business Corporation Law, General Corporation Law, Stock Corporation Law, Membership Corporation Law, Tax Law, Penal Law, etc.

The manual is of particular value in that it contains numerous important changes in the laws of a year ago as affecting New York Corporations. Some changes are amendments to existing sections of the laws, and others are entirely new matter. In fact, the recent legislature adopted forty separate acts in the form of amendments, and three others which are related closely to corporate activity.

The excellent annotations upon judicial decisions, found in previous editions, are continued in the present one with numerous additions. These abstracts contain the Court's exact language. They comprise a substantial case book on corporation law.

The synoptic analysis and index are exceedingly complete, permitting one to locate quickly a point upon which the interest is focused.

Reviews of previous editions have emphasized the desirability of practicing accountants and accounting teachers familiarizing themselves with the practical phases of corporate activity in order to do a better job. Nothing need be added at this time except to reemphasize the idea. Just how anyone can practice or teach corporate accounting without knowing the requirements of the laws of his jurisdiction thereto related, and perform in a practical fashion is impossible to contemplate. No matter how beautiful the theory, if the law holds otherwise, the theory in local application is useless.

Numerous candidates sitting in C.P.A. examinations are disappointed in their grading results due many times to the fact that the local legal requirements applicable to an accounting situation are unknown—at least in so far as the answer or solution paper is concerned.

GEORGE E. BENNETT

Syracuse University

The Science of Valuation and Depreciation. Edwin B. Kurtz. (New York: The Ronald Press Company, 1927, pp. xiv, 221. $4.50.)

This volume is primarily concerned with the problem of securing exact data concerning the life experience of depreciating assets. It is an attempt to apply to industrial and utility equipment principles similar to those used in life insurance. Illustrations of 65 different types of equipment, with life experience data, give some indication of how these principles can be applied.

From the accountants' point of view, the most interesting sections of this volume are those dealing with average life of equipment and replacement insurance. Straight-line depreciation, based on average life, is widely used but unless some scientific method is used in determining the average life, it is likely to result in inaccurate figures for earnings and reserves. Table III includes summaries of average life, and median and modal years for the 65 property groups studied. Very different results are obtained by using the average, the median or the mode. For the 65 groups studied, averaged together, the average life was equal to 1.037 median years and 1.131 modal years. For these groups it was found that "the average life and median are in close agreement in nearly every case, but the average life and mode vary widely in individual cases. The median is therefore a much more reliable figure than The mode in case the average life has not been computed."

The author appears to favor a depreciation policy based on replacement insurance rather than one based on average life. "The annual replacement allowance, or premium in this plan, will . . . be dependent upon the wearing value, that is, cost new less salvage, and the probability of that unit going out of service; the latter is to be obtained from actual life experience. The total of the premiums for all the property units of a given company constitutes the amount that must be set aside annually and allowed to earn interest at the assumed rate. In other words, the cost of replacement of each unit, and the number to be replaced each year, rather than the average life, determine the magnitude of the annual credit to the replacement reserve."

This method, of course, must be based on past experience and presumably the original cost is referred to when the author speaks of "the cost of replacement of each unit." The author, apparently, contemplates the actual creation of a fund although he speaks of such accumulation of assets as a reserve and credit. He also makes the statement that "The amount standing to the credit of the reserve at any time measures the then present value of the obligation to make future replacements."

The chief advantages of this plan is said to be that it eliminates the use of guess-work averages, and is easy to apply. "It is simple to apply because collections are made from all units in service. Any time a unit is removed from service, it is forgotten as far as the accounting is concerned. Collections are only made from the units actually on the inventory. In both the straight line and sinking fund methods collections are made for a given unit for a given period of years. Often the unit is already removed from service and no longer in existence, and still collections are made for it; while at other times units which have out-lived the average life and are still in service have no allowances demanded of them. . . . The replacement insurance plan on the contrary is always up to date, and always in accord with the inventory."

This plan is elaborately supported with tables and graphs but the presentation of this method does little to support the claim of simplicity and ease of application.

FRANK P. SMITH

University of Rochester

Alexander Federal Tax Course and Guide—1938 (New York: The Alexander Publishing Company, Inc., Pp. x, 1111. $10.)

This volume opens with 486 pages of text as compared with 339 which appeared in last year's edition. Once again, to quote the words of Professor Toner, who wrote the review of the earlier edition and who has now left teaching to become Vice-President of the Boston Edison Company, we have here "a masterly condensation of present Federal taxes, regulations, rulings and decisions. The material is presented in a logical manner and its study is aided by the questions, problems and research references for each chapter." This reviewer likes illustrations such as are found on pages 12 and 13 and wished that more of them could be found in the following pages. The text is spoiled somewhat by rather numerous typographical errors. An experienced teacher can spot them readily and will have little difficulty with them, since the corrections to be made are rather obvious. The material has been brought so completely up-to-date that the work had to be done under extreme pressure. Of important errors none was noted. In general the order of the text and the scope of

the material covered are about the same as in the 1937 edition.

The questions which accompany each chapter and the 215 problems which appear with solutions in Part III of the course are excellent for the purpose of testing the memory and the ability to apply the text material to concrete situations. The fact that the solutions alone require about 70 large printed pages may give some indication of the time that students would need to do an adequate job with the problems. In addition to the questions, each chapter is followed by research references to law, articles, decisions, and rulings.

As soon as the Treasury Department releases the new forms for reporting 1937 incomes, specimen tax returns, filled in with actual figures, and explained, are to be sent to the buyers of the course to be inserted as the second part of the course.

The last section of the course contains the complete text of the 1936 Revenue Act as amended by the 1937 Revenue Act, and the text of law relating to estate tax, gift tax, and stamp tax, together with Regulations 94. An explanatory summary of changes made by the Revenue Act of 1937 is also included.

Recently the Alexander Publishing Company, Inc., has issued as a supplement to the course "How to Reduce the Undistributed Profits Tax," a booklet of 137 pages, additional copies of which are available at $2 each. The text deals in detail with all important aspects of this tax and is followed by pertinent sections of the Revenue Act of 1936, Regulations 94, and Digests of Treasury Rulings. The text itself occupies 96 pages of the booklet and should be of wide interest to corporation executives, tax practitioners, and teachers.

Arthur W. Hanson

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The National Debt and Government Credit. (New York: Twentieth Century Fund, Inc., 1937, pp. xvii, 171. $1.75.)

There is no doubt that the Twentieth Century Fund addresses itself to problems of current national interest, it having recently published surveys and reports upon "Big Business" and its profitability, old age security and taxation. The work which is the subject of this review continues that record, for there is much interest in the problem of our unprecedented national debt of over $36 billions and its significance in terms of government credit. However, this book makes little, if any, contribution to thinking on this vital subject. The Fund was of considerable aid to *Facing the Tax Problem*, reviewed in the June issue of this publication, and it took some 500 pages to face it; but it could face the debt problem in only 150 pages of text, tables and charts. This abbreviation is accomplished by avoiding any analysis of the crucial issues in the Federal bugetary problem, such as what expenditures should be curtailed and how to accomplish such curtailment in the teeth of the pressure groups.

The "factual findings," constituting the first seven chapters of the book, were made by Paul W. Stewart, formerly chief business specialist of the Department of Commerce, and Rufus S. Tucker, formerly chief economic analyst of the Treasury Department, with the assistance of Carolyn Stetson. The eighth and last chapter contains a "program of action" prepared on the basis of the preceding factual survey by the Fund's Committee on Government Credit, of which Oswald W. Knauth, president of the Associated Dry Goods Corporation, was chairman. Other members of the committee were Professor James W. Angell of Columbia, Director Joanna Colcord of the Charity Organization Department of the Russell Sage Foundation, President George M. Harrison of the Brotherhood of Railway and Steamship Clerks, President George M. Putnam of the New Hamsphire Farm Bureau Federation, and Donald R. Richberg, former New Dealer. As one might expect from such a varied group, a program of inaction rather than action emerges from their final chapter.

This study was aimed at the relation between the national debt and government credit. Answers were sought to three questions. These, and their answers, were: (1) Has the unprecedented debt undermined government credit? No. (2) Will further increases in that debt, or its maintenance at the present level, seriously threaten the confidence of investors? Yes. (3) If so, how much debt reduction is desirable? More than $400 million per year.

It is unlikely that members of the accounting profession will learn much from the conclusions, nor will they be impressed by the method used in arriving at them. Much wearing the guise of fact remains guesswork, assumption, theory, or mere truism. A sample is the following: "A heavier program of taxation, particularly on large incomes, probably would have retarded the rising tide of speculation leading to the boom of 1928–29 and would have permitted the country to enter the depression, which would have probably been less acute, with a smaller debt." (p. 37).

While rejecting the marketability of new issues of government bonds as a test of government credit, for reasons obvious to readers of the Accounting Review, the authors curiously enough view refunding operations as a favorable test. This distinction is based on the assumption that a larger proportion of holders of the refunded First and Fourth Liberty bonds were private investors and non-financial corporations than were the buyers of recent issues, largely banks and insurance companies. Assuming this was true, refunding is still a sale in fact; and private individuals and industrial corporations can hardly find more profitable outlets for surplus funds than can financial institutions, given present conditions.

It seems to this reviewer that the possibility of inflation is inextricably connected with executive control of the budget, a control impossible without at least an item veto. A way to balance the budget is by levying more taxes—but why leave the spigot running while we worry about an incipient draught? Another way to balance the budget is by curtailment of expenditures—but behind each item is a group convinced that the cause of good government will suffer if that particular expenditure is reduced or cut out. It takes more than good intentions on the part of the Chief Executive to meet this problem; it takes power, legal as well as

political. The authors do not venture into this highly-charged area, which may very well include the need for constitutional changes. They content themselves with pointing to the danger from "raids on the Treasury by pressure groups" (p. 127), and with stating that "whatever may have been the merits or demerits of the government's fiscal policies in the past, the fact remains: they have not yet undermined its credit." (p. 128).

The "program of action" of the Committee is substantially a reiteration of the points made by the research staff, summarized in the three questions and answers stated near the beginning of this review It is more wishful than practicable: a balanced budget by 1938 and expenditures held within the forecast of the President's *Budget Message* of January 5, 1937. If this proves impossible, or if existing taxes do not bring in the necessary cash, "additional revenues consistent with a sound public policy should be provided at this session of Congress of sufficient size to bring the budget into balance." (p. 154).

One member, Miss Joanna Colcord, agreed with the Committee that the budget should be balanced; but she wanted this accomplished by increasing government revenue rather than "decreasing any government expenditures necessary to promote the health and welfare of the people." (p. 157). Is there any government expenditure, past, present or future, which is not viewed by many as obviously promoting "the health and welfare of the people"? The sentiment, while wholly worthy, seems out of place in a "program of action." Incidentally, Miss Colcord's suggestion for increasing government revenue contains a new and altogether charming substitute for "Soak the Rich." It is "bringing taxation to bear more fully upon those groups whose consumption is lowest in proportion to their total resources." (p. 157).

A valuable portion of the book is the series of charts and tables, which pull together in convenient form an interesting and important set of figures. To mention only a few, these include: the gross debt of the Federal government, 1836–1937; the ratio of Federal government gross debt to national wealth; the per capita Federal gross debt and total government net debt; and receipts and expenditures of the Federal government, 1836–1937. In all there are 14 charts of such statistics concerning this country, and 6 more comparing our debt and expenditures on several bases with those of the United Kingdom and France. The six tables are also convenient for reference purposes. For guidance in discovering the significance of this information to us as citizens or business men, however, one must look elsewhere. Nor does this book furnish a program of action so much as an expression of sentiment which is of the most general character and very widely held.

J. Harold DeNike

Harvard Graduate School of Business Administration

Operating Results of Department and Specialty Stores in 1936. Carl N. Schmalz. (Boston: Harvard Bureau of Business Research, pp. vi, 38. $2.50.)

This series of annual reports on the margins, expenses, and profits of department and specialty stores is well-known to most readers of the Accounting Review Therefore, attention will now be directed to the changes which have been made in the present report, to the trends noted through an analysis of the 1936 data, and to the suggestions made to store executives.

The detailed treatment of year-to-year trends has been omitted. However, many comparisons with previous years are made in the summary and conclusions section. Although comparative data by years is not given in tables as previously, still the exposition furnishes an excellent picture of trends and both space in the publication and time of the reader are conserved. Individuals who wish to work with data of other years can refer to previous reports. A new expense division has been added to the expense breakdown. It is Percentages of Net Credit Sales. There are three subdivisions as follows: (1) Pay Roll: Accounts Receivable and Credit; (2) Losses from Bad Debts; (3) Interest on Accounts Receivable. "The total of accounts receivable and credit pay roll, losses from bad debts, and interest on accounts receivable outstanding for the five groups of department stores with sales of $1,000,000 or more ranged from 3.45% to 2.8% of credit sales. For specialty stores with sales of $2,000,000 to $4,000,000, the total was smaller, 2.4%. Accounts receivable outstanding (averages of balances at the beginning and end of the year) typically were from 22% to 27% of credit sales for department stores, and from 18% to 21.8% for specialty stores."

Sales in both department and specialty stores continued to increase in 1936. In the ten groups of department stores studied, the increase ranged from 7.6% to 13% with larger increases in the larger stores. For department store business "the great depression is definitely a matter of history." Dollar sales in 1936 were roughly 16% below the average level of 1929 by physical volume was 7% above 1929 and but 2% below the all-time high established in the first six months of 1931. Profits likewise increased markedly, occasioned largely by lower expense and by a higher maintained mark-up. The gross margins taken by the stores did not change appreciably but they did not find it necessary to take as great mark-downs thus achieving a higher maintained mark-up. The expense percentage was lower as a result of increased volume without a proportionate increase in expense. The author notes that 1936 pay roll was not influenced by union activity in the retail field but that higher pay roll costs may appear in 1937.

The suggestions made are largely in regard to the need of further study. Problems occasioned by the depression are a thing of the past but the older problems are still present and, perhaps, in an aggravated form. Among them are competition with other forms of retailing, a revision of service and service costs in conformance with consumer desires, employee relations, and the ever-present problem of making adjustments in anticipation of changes in business conditions. With department and specialty store business at high tide, executives should "get ready for the difficulties which lie ahead."

D. M. Phelps

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The Monetary Experience of Belgium, 1914–1936. Henry L. Shepherd. (Princeton: Princeton University Press, 1936, pp. xvi, 271. $3.00.)

In the foreword, Dr. Kemmerer announces that this is the sixth in the series being published under the auspices of the International Finance Section of the Department of Economics and Social Institutions of Princeton University. This study begins with suspension of the gold standard on August 2, 1914, and ends with the second post-war devaluation of April 1, 1936.

Part I traces the inflation to its origins in the events of the occupation and in the decisions taken by the Belgian government after the Armistice. To this end seven chapters are developed. The first of these describes the five forms of currency in circulation during the occupation and of these the Reichsbank note was numerically the most important. Dr. Shepherd accounts for 15 billion paper francs of the 19 billions expended by the government, as the result of war losses, "... recoverable under the terms of the peace treaty." There is an interesting chapter devoted to "The withdrawal of Marks from Circulation," followed by another in criticism of the methods employed, in which it is said that "Between one and two billions of the 6,109 million marks redeemed in the form of National Bank notes and deposits and Monetary Restoration Bonds were not in circulation in Belgium during the German Occupation." In other words, marks were smuggled into Belgium. Dr. Shepherd thinks that the marks should have been converted into long-term bonds at a conversion rate and during a period of time which would have discouraged smuggling.

"A robust optimism prevailed in Belgium during the first five years after the armistice.... Two illusions fed this optimism." One of these was the idea that Germany would speedily pay the reparations claims in full and the other, that the franc would recover its pre-war level on the exchanges. If the latter were realized, then borrowing abroad could be repaid at a higher rate in Belgian exchange than that which prevailed when the loans were arranged. The ultimate cost of these two illusions is fully brought out. During the first eight post-war years Germany's payments to Belgium came to 7,241,000,000 francs "... whereas the 'recoverable expenses' totalled 19,224,000,000 francs."

The rate of conversion of francs for marks contributed to the inflation and the optimism as to reparations from Germany led to methods of financing restoration that were not as conservative as they might have been. It is not surprising that the Belgian franc lost 62% of its value in terms of the current dollar between January 1919 and April 1920. In the period from April 1920 to January 1923, the franc remained fairly stable in terms of the current dollar and actually appreciated in terms of the 1913 dollar. Velocity played a considerable part in the inflation and Chapter 2, Part II, develops this subject in a most interesting way as a part of the discussion of "The Course of Belgian Inflation, 1919–1926." Using an index of industrial production, Dr. Shepherd finds that velocity of circulation increased from 33 in 1921 to 96 in 1926. However, the feeling of confidence in the future of the currency kept the rate of turnover between one-third and one-half of the pre-war rate. (p. 77) It appears that bank credit played but a minor part in the inflation process. A valuable contribution is found in Chapter 5, Part II, on, "The Solidarity of the French and Belgian Francs." There it is maintained that "... the similarity of underlying economic conditions accounted for the franc solidarity." (p. 96) Velocity of circulation, "... so sensitive to popular confidence, or the lack of it, became the chief factor in the money-price-exchange picture in both countries."

Part III, "The First Attempt at Stabilization, October 1925–March 1926" is developed in seven chapters. Here the Janssen Plan is explained and it is said that "Failure to receive the foreign loan (contemplated) signalized the collapse of the Janssen Plan." Unfortunately, the francs retired with foreign exchange were reissued again by the National Bank for the retirement of maturing Treasury bonds. Part IV, "Successful Stabilization, May–October, 1926," includes six chapters. Among the interesting points brought out here is the fact that "... the belga was conceived primarily for a very particular reason: to inform the trading world that the Belgian unit was no longer to be confused with the franc of France." Dr. Shepherd does not have much to say in favor of Francqui's stabilization of the franc.

Part V, considers "The Devaluation of 1935–36." Here it is observed that "... the fault lay not so much in the actual rate adopted (for stabilization) as in the judgment entertained in industry and banking respecting the long-run effects of that rate." It developed a spirit of speculation and over-optimism which led to disastrous results. The impact of adverse factors became more acute when sterling left its gold anchorage, for "... Great Britain (was) at the same time one of Belgium's three best customers and also one of her leading competitors in foreign markets." Depreciation of the pound nullified the effects of "... months of painful deflation in Belgium."

As for "The Second Devaluation, March–April, 1935" Dr. Shepherd is clearly of the opinion that the large volume of bank investments, which became progressively less liquid as the depression deepened, was the immediate cause of devaluation. (p. 222) "By the spring of 1935 confidence in their solvency had almost disappeared." The author also appears to feel that "... the lessons of contemporary American experience were clear enough to enable the Van Zeeland government to avoid the most obvious errors in public policy; and recovery in Belgium, up to the time of writing, had proceeded on a sound basis." These concluding words protect the author, for events since the "time of writing" have not been so favorable. It is to be hoped that Dr. Shepherd will find it possible to continue his studies of Belgian finance, either by additions to this volume, or by a separate study, for few writers have succeeded in presenting a better analysis of the monetary troubles of any country arising out of the War. The volume is one which every student of monetary economics should ponder with diligence, for it throws light on many significant and intricate problems which are by no means a thing of the past at least so far as the United States is concerned.

E. A. Kincaid

University of Virginia

Income Tax Fundamentals. Frederick Leon Pearce. (Chicago: The Foundation Press, Inc., 1937, pp. xxiv, 581. $5.00.)

The author of this work is both an attorney at law and a certified public accountant of the District of Columbia. He has arranged his material in 27 chapters with the following headings:

(1) The Foreground of Federal Income Tax
(2) Classification of Taxpayers and Net Income
(3) Gross Income
(4) Exclusions from Gross Income; and Inventories
(5) Deductions from Gross Income
(6) Deductions from Gross Income (continued)
(7) Deductions from Gross Income (continued
Depreciation and Depletion
(8) Items not Deductible from Gross Income
(9) Credits and Computation of Tax
(10) Accounting Periods and Accounting Methods
(11) The General Accounting Systems
(12) Special Methods of Accounting
(13) Organization Exempts and Taxpayers Specially Taxed
(14) Amount and Recognition of Gain or Loss
(15) Definitions of Reorganization
(16) Historical Development of Basis Concept
(17) Basis in General of Property
(18) Historical Development of Tax-Deferring Transactions and Basis Thereafter
(19) Basis after Tax-Deferring Exchanges
(20) Basis After Other Tax-Deferring Transactions
(21) Miscellaneous Basis Provisions
(22) Adjusted Basis; Substituted Basis; Depreciation and Depletion
(23) Distributions by Corporations; and Capital Gains and Losses
(24) Estates, Trusts and Partnerships
(25) Insurance Companies
(26) Returns and Payments of Tax
(27) Deficiencies and Overpayments of Income Tax

Perhaps the purpose and scope of the work can best be shown by quoting two paragraphs from the "introduction":

"This text is not expected to produce experts in income tax litigation nor to answer all questions which might be propounded upon minute details of the Federal income tax statutes or their interpretation. It is intended, however, to give a broad picture of the fundamental structure of the Federal income tax, to point out the problems involved in the computation of taxable net income and the resulting tax, and to give a working knowledge of the income tax provisions of the current Federal Revenue Act of 1936. Upon completion of the study the reader should be able to prepare the usual run of Federal income tax returns, and with some further research should be able to solve all but the most technical problems that arise in the usual course of personal and business affairs."

"There appears to be a popular misconception that income tax matters are to complicated to be grasped by the average individual. In the past, however, too little attention appears to have been given to a study and adequate grasp of the fundamental structure of the statute before the student has been led into the most intricate problems of detail. The tree has been lost in a premature study of twigs and leaves. We hope here to delineate the trunk and limbs and leave the full fruition for more mature consideration."

It appears to the reviewer that the author has been extremely modest in his claims as to what the book is capable of doing. Although the work is said, several times, to be an elementary study, it is packed from cover to cover with very solid meat. Sentence after sentence is accompanied by a foot-note referring to a specific case or regulation on the point. As a rule throughout the book 10 or 20 foot-notes to the page are found. Perhaps to one as deeply steeped as the author appears to be in his subject, this work may appear to be elementary, but it is far richer in content than the average elementary work in this field. At times the reader may feel that perhaps here also "The tree has been lost in a premature study of twigs and leaves." Whether or not this is so may depend upon the type of student who uses it and the duration of the course. The work is "intended primarily to be used as a text in law, accounting, and business schools in a course upon the fundamentals of Federal income tax." In so far as it is put in the hands of mature graduate students or is used by undergraduates only in courses in which there is plenty of time for study, deliberation, and discussion, it will probably be an excellent text, but undergraduates cannot be expected to run through it in the usual half-course to the greatest advantage.

As is indicated somewhat in the chapter headings the book gives much consideration to the historical development of many of the provisions in the present law. Although this material may in certain cases prove to be a tax upon the memory, nevertheless it sheds much light on the meaning and interpretation of the present law. The reviewer feels that this book is capable of serving as a satisfactory reference book in many an office which must be content with a rather limited library.

Arthur W. Hanson

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Office Management. John H. MacDonald. (New York: Prentice Hall, Inc. 1937, pp. xx, 593. $5.00)

This is a revised and enlarged edition of Mr. MacDonald's "Office Management" published in 1927. The same basic subjects are presented that appeared in the original text ten years ago, but the new edition shows marked improvement over the old, obviously due to effective editing.

Vague general terms of the original edition have been deleted, and in their place are found clear, definitive words. Thus whatever material has been taken over from the old, has been re-set into a clearer presentation in the new text. Although this result is to be expected of any author who presents a revised edition, Mr. MacDonald is to be highly commended for his "better-than-average" revision. For this accomplishment the reader will be truly grateful.

Not only has the basic material been improved; a large amount of new discussion has been added. The new edition has 593 pages as compared with 275 in the

old. Illustrations have been increased from 46 to 147. During the past ten years much progress has been made in office procedures and in the creation of new office equipment. The office manager himself has assumed a much larger and more responsible function. Because of this progress and expansion within the field, the author was compelled to enlarge his text. In adding new material, however, his problem was to select the best. In general the new material was wisely selected. Most recent developments are presented, and discussed. Numerous references are made to recent accomplishments in office management, and cases are cited to illustrate the adoption of improved office procedure.

It is fair to say that the book is a complete description of office management. All phases are considered. The vital relationship of the office manager to every part of a business is repeatedly stressed. In the first nine chapters the reader finds discussions of organization, physical factors, layouts, equipment and appliances, with detailed descriptions of the organization and work of filing and stenographic departments. Chapters X–XV present the relation of the office manager to the production, sales, advertising, purchasing and credit departments, as well as to minor service units, such as the mailing department, messenger service, information, telephone service, and office supply stock room.

The remainder of the text deals with a variety of subjects such as branch office management, office manual, office forms and reports, and office costs and budget. The last five chapters of the book are a discussion of personnel problems in the office, including the selection of office employees, their training and promotion, supervision and standardization of pay for office employees.

In the preface the author suggests that this book "should be equally valuable to business executives, to office managers, to teachers, and to students." This, however, does not appear to be equally true for all four classes of persons. Students, for example, who are taking a course in office management should be expected to apply the general principles outlined in the text to various situations, of a more or less practical nature.

Thus, if a student is studying about office lay-outs, or the office budget, and merely reads the text without attempting to set up an office lay-out or possibly an office budget for a particular business, he will acquire little practical knowledge. If, however, an *office manager* reads what Mr. MacDonald has to say on office lay-out, the manager will understand fully what is meant because he has probably had some experience in planning an office.

It is apparent, therefore, that office managers will benefit much more from the text than will students. If the book was intended to be used as a textbook, the author might well have included problems for each chapter. This lack of problems, however, is not a serious handicap for teachers. They can easily supply problems of their own, and thus the text may be used effectively in the class room.

There is one point that seems to be unduly emphasized throughout the text. The author seeks to magnify and glorify the position of office managership. It is evident that the author is seriously interested in helping the office manager "secure everywhere the status that the importance of his work warrants." In chapter I the author speaks of "the profession of office management." He refers to "the question of whether the office manager has as yet attained, or indeed can every hope to secure, professional status comparable for example, with that of accountants, of the corporation lawyer, or of the advertising man." Then he offers the suggestion that "substantial progress has been made toward bringing office management closer to the status of a profession." Finally, the author admits that "a much wider application of the principles of scientific management to the organization and operation of offices must be made before office management can truly be called a profession."

It is difficult for one to agree with these observations of the author. It is difficult to see how an office manager can be properly considered a professional man. Furthermore, how would the application of the principles of scientific management to the organization and operation of offices place the office manager into a professional classification?

A professional man renders a direct service to society. Thus, a doctor, lawyer, accountant, teacher, and others have a responsibility to society, and their services are generally spoken of as professional. It is of course, obvious that office managers can not be considered as professional men. They render services to all parts of a particular business, but do not claim to render services to *society*. If an office manager does apply the principles of scientific management of his office he is more of a scientist than a professional man.

The title of the first chapter might well, be, therefore, something other than "The Profession of Office Management." Mr. MacDonald probably has used the term "profession" in its broadest connotation. Some have even gone so far as to speak of business as a "profession."

Mr. MacDonald is to be commended also upon certain mechanical features of his book. It is unusually well printed, adequately illustrated, properly indexed, and supplied with a complete bibliography of the most important references to recent literature. It will be of value to office division heads as well as to office managers, and should be of special interest to teachers of office management.

E. L. Theiss

University of Illinois

The Credit Problem. E. F. M. Durbin. (New York: John Wiley & Sons, 1935, pp. xxi, 267. $3.00.)

Mr. Durbin believes it is possible to "... state much more clearly than ever before what can and should be done in the realm of credit policy to secure and maintain indefinitely full employment and the maximum of productivity." He has, therefore, written this book in order to "... set forth certain conclusions about credit policy which ... follow logically from recent theoretical analysis ...." In approaching the task he feels that "... monetary theory and credit policy has ... been too much dominated by the assumption of price flexibility," and in this he has provided one of several excellent reasons for the publication of this volume. It should be added that Mr. Dur-

bin admits his indebtedness to Hayek, Keynes and Robertson.

The validity of the quantity theory in its simple forms is taken as a foundation along with certain other premises for the examination of what "... changes in the volume of effective money will preserve full industrial equilibrium ..." in a dynamic society. He then takes up "The Dynamics of the Industrial and Financial Circulation," and comes to the conclusion that "... the volume of real adjustment resulting from a given injection (of credit) will depend upon the period of mobility and the period of transaction velocity ..." (p. 50). But, the rate of injection must be considered and also the extent of contract friction, for the greater the latter the more rapidly will consumers' income be raised during an inflation and independently of the position at which the money is injected. From this position he works to the position that "... an increase in the demand for consumption goods will always increase the absolute demand for capital and sometimes even the relative demand." The conclusion is then reached that "... the demand for money from the banks for use in productive enterprize is chiefly controlled by the Rate of Invention and the level of money profits," and compared to these two dynamic forces "... the movements in the Market Rate of Interest are of small importance in determining the volume of the *Industrial* Circulation in the short period."

The subject is continued with respect to saving and investing and the "... reduction of the volume of effective money and the mechanisms of a *deflation*." It is held that "Disequilibrium begins when there is a *net* loss of money to the Financial Circulation" (p. 90). The forms of divergence between saving and investing are examined with care and it is concluded that "Large stocks of securities, just as much as large stocks of commodities, constitute a continuous and serious threat to monetary equilibrium and the existence of stocks of securities is inevitable in a way that stocks of commodities are not" (p. 103).

"The Choice of Policy" is the subject of Chapter IV. Here the author is concerned with dynamic equilibrium. In this connection a number of important observations are made. Thus, "It is impossible to avoid a conflict between the interests of price stabilization and the maintenance of profit expectations of entrepreneurs. That is the real dilemma of price stabilization policies in the face of relatively constant prices for the factors of production." Again, "It is generally impossible to disappoint profit expectations without creating a severely deflationary situation." Moreover, "... at the end of a prolonged period of inflation a sudden 'stabilisation' cannot be made smoothly without a reaction." Since there should be no deflationary wastage of saving. Mr. Durbin is unable to accept the view of Hayek that a constant circulation is essential to monetary equilibrium in an economy sustained by temporal contracts. His analysis of this view is exceptionally strong.

The discussion then passes to the use of consumers' credits. Free money can be introduced into the system by means of (a) payments to employees of the government with new paper money or by (b) raising the costs to the producers of the primary factors. It is remarked that "Something like this is being attempted in America" (p. 130). But it is concluded that "... the practical difficulties of a constant policy of Consumers' Credits is almost insurmountable within the limits imposed by our present financial and economic institutions." In other words, if wages and other primary factor prices are slow to move relative to prices, "... the only practicable policy is that of stabilising money incomes." Accordingly, it is to this policy, its implications and execution, that the discussion turns. What about the possibilities of constant money incomes under dynamic conditions? The simpler obstacles are first considered and then the more complex. Among the latter the most serious is the "... determination of Trade Union officials to organize a firm resistance to the reduction of money rates" (p. 161) and it is concluded that for this situation "... there appears to be no real solution within the mechanisms of competitive banking practice."

As for practical policy, neither the indices nor the material to make them is now available. Even if the figures are available they have serious defects, since it is impossible to measure the quantity of property transfer which does not pass through the stock exchange and it is impossible to segregate private clearings from trade clearings in the total of cash transactions. Finally, there is the problem of interpretation of the figures. Still, all of these things must be achieved, if we are "... ever to progress far on the road to an enlightened credit policy" (p. 193). With the necessary data, the central bank should then proceed to the stabilization of the average clearings per head of population by the use of orthodox credit instruments of policy. Should these prove ineffective, then resort to taxation is the final step. Incidentally, the gold standard is rejected "... until we have discovered some method of restoring elasticity to the income system by changes which do not involve far-reaching social dislocation ..."

In the final chapter, "Planned Money and Constant Prices" it is concluded that there is "... an extremely strong a priori case for believing that a centralized Banking Authority will remedy precisely those deficiencies from which our existing monetary system suffers." and, therefore, make possible a stabilization of money incomes. Incidentally, it is remarked that the failure of economists to face the essential task, in the spirit in which it is faced in this volume, is responsible for the prevalence of monetary cranks. An appendix, with further discussion of certain views of Hayek, Keynes and Robertson, concludes the volume. Concerning it one must admit the high level of the thinking which constantly prevails, the real effort to think the problem of stability through, and the considerable degree of success achieved. For these reasons the book is difficult reading, but highly compensating. Accordingly all students of monetary economics will be obliged to study it with care and also test the views advanced and those advanced in other treatises against each other. It might be added that this volume should be of great value to graduate students of monetary problems.

E. A. Kincaid

University of Virginia

UNIVERSITY NOTES

University of Alabama

Langston Hawley, instructor in economics and accounting, is on leave to act as chief of the division of information of the Alabama Unemployment Commission. Mr. Howard Mann, M. A. Iowa, who served as instructor in accounting during the second semester last year has been appointed to a regular instructorship.

Professor H. H. Chapman has been appointed statistical adviser of the Alabama Development Board. Professor Knight is supervising the merit examinations for positions with the Alabama Unemployment Compensation Commission.

There have been substantial increases in enrolment this year and the School of Commerce now has over 1000 students.

University of Buffalo

Mr. J. Ralph Toepfer, C. P. A., has been appointed instructor in accounting for the year. Mr. Toepfer is senior partner in the public accounting firm of Toepfer and Magee of Buffalo.

University of California at Los Angeles

Mr. Perry Mason returned to Antioch College after a year as visiting professor of accounting at the University of California at Los Angeles.

Professor W. E. Karrenbroek of the University of Illinois will be visiting professor this year.

University of Cincinnati

Mr. Kenneth E. Hittinger has been added to the staff as instructor in accounting. Professor Arthur W. Holmes is joint author with Earl A. Saliers of "Basic Accounting Principles," published this year by Business Publications, Inc.

University of Colorado

Mr. G. G. Fullerton has recently been promoted to the rank of associate professor and Mr. H. W. Kendrick to the rank of professor. Mr. Fullerton was recently elected vice-president of the Denver chapter of the N. A. C. A.

Two years of Accounting are now required of all students in the School of Business.

Columbia University

Professor James L. Dohr of the School of Business, has been appointed Co-receiver of the New York, Westchester, and Boston Railway by Judge Knox of the United States District Court. The Honorable Edwin L. Garvin is the other receiver.

University of Denver

Dean Clem W. Collins was elected President of the American Institute of Accountants at the annual meeting in New York City October 1922. Dean Collins is head of the department of accounting at Denver University and is a practicing certified public accountant. He has served as president of the State Board of Accountancy and as a member of the council of the American Institute.

University of Illinois

Professor Hiram T. Scovill has been elected president of the Illinois Society of Certified Public Accountants for the year 1937–38.

A suit brought against the University of Illinois by Fred Elliott et al. has been decided in favor of the University by the Supreme Court. The suit was a test of the constitutionality of the Illinois C. P. A. law of 1903, which is administered by the University.

University of Iowa

Two instructors have been added to the accounting staff: Mr. J. Max Cadwallader, a graduate of Iowa and recently field examiner for the Income Tax Division of the Iowa Board of Assessment and Review; and Mr. Edward B. Austin, a graduate of the University of Arkansas.

Under the Iowa law of 1929 provision is made for the practice of public accounting under two designations, certified public accountant and public accountant. For approximately eight years the active professional organization in the state has been the Association of Iowa Accountants including in its membership both Certified and non-certified practitioners. Recently plans have been adopted for resumption of activity on the part of the dormant Iowa Society of Certified Public Accountants and the merging of the Association and the Society.

University of Kentucky

Robert D. Haun, associate professor of accounting, has returned to the staff after a year's leave of absence spent in the study of law at the University of Michigan. Mr. H. B. Moore has been appointed associate professor of marketing and Mr. Hollis Preston Guy assistant professor of economics.

Louisiana State University

Professor Earl Sailers is revising *Depreciation: Principles and Applications*, to be published soon

by Ronald Press. Mr. Saliers recently addressed the Houston chapter of the N. A. C. A. on the subject "Accounting for the Plant Dollar."

Wayne R. Roane and H. E. Hawthorne, former students, passed the May C. P. A. examinations.

Recent tests made of the six week hour examinations of 550 Freshmen in the first semester of elementary accounting would seem to indicate that students having had one year of high school bookkeeping have no advantage over those who had no such preparation. In the cumulative averages grades for those with previous bookkeeping were lower than those who had had no high school bookkeeping. Students who had had two years of high school bookkeeping received, on the average, 8 to 10 points higher than the others. Continued tests will be made throughout the year to determine whether advantages may appear later.

University of Michigan

Professor Taggart has been granted leave of absence for the second semester of this year and will spend his time in Washington, D. C. studying distribution costs in the Bureau of Domestic and Foreign Commerce.

The School of Business Administration and the Michigan Association of Certified Public Accountants were joint sponsors of the Michigan Accounting Conference held at Ann Arbor on November 19. Speakers were George W. Morris of Washington, D. C.; Howard Greer of the Institute of American Meat Packers, Chicago; Corwin Edwards, economist of the Federal Trade Commission; Grant Chandler, partner of Arthur Anderson and Co.; and Randolph G. Adams, director of the Clements Library of American History at the University of Michigan.

Mr. L. L. Laing is offering a new course in Governmental Accounting this year.

University of Missouri

An accounting club was recently organized with a membership of sixty students. Fifty-one undergraduate members subscribed for the Accounting Review as a group. Discussion meetings are to be held monthly.

University of Montana

The C. P. A. committee is preparing a pamphlet on rules and regulations effective in administering the new C. P. A. law.

Students in Business Administration are now required to take an entrance test in arithmetic.

University of Oklahoma

Professor Arnold W. Johnson has recently published through the firm of Farrar and Rinehart his new text *Principles of Accounting*. Mr. Johnson received his C. P. A. certificate at the May examinations this year.

University of Oregon

Mr. O. Robert Anderson, B.A. University of Washington, has been added to the staff as instructor in business administration and Mr. Wilson Siegmund, B.S. Oregon, as graduate assistant.

Professor C. L. Kelly attended the national convention of the American Institute of Accountants in New York City in October.

Southern Methodist University

Mr. Dudley W. Curry, B.S. Commerce 1936, has returned to Southern Methodist as instructor in accounting after a year spent at Northwestern University completing graduate work for an M.B.A.

Temple University

The following certified public accountants are coöperating with the accounting department in a course in the evening school on accounting practice: R. J. Bennett, Secretary of the Pennsylvania Institute; John K. Mathieson of Mathieson, Aitken, and Co.; Frank M. Speakman, consulting actuary; William H. Welcker of Chas. Rockey and Co.; A. Karl Fisher, of Lybrand, Ross Bros., and Montgomery; Clarence L. Turner of Turner, Crook, and Zebley.

University of Tennessee

New members of the department this year are:

M. O. Ross, associate professor of finance; Paul Barnett, associate professor of statistics and director of the bureau of business research; James C. Nelson, associate professor of marketing; Mrs. Marion T. Lyndon, associate professor of marketing; Benjamin R. Haynes, who will organize a department of business education in coöperation with the College of Education; Clyde W. Humphrey, assistant professor of secretarial science.

Mr. W. Howard McGiboney, instructor in accounting, has been loaned to the University by the T. V. A. Mr. Harold Read, assistant professor of accounting, is on leave of absence for the fall quarter to study municipal accounting systems of Tennessee counties.

University of Texas

Mr. Paul S. Garner, of Mississippi State College, and W. F. Farrar from Monroe High School, Louisiana, are tutors in business administration.

AMERICAN ACCOUNTING ASSOCIATION
22nd Annual Meeting
Chalfonte-Haddon Hall, Atlantic City, New Jersey
December 27–29, 1937

First Session. 2 P.M., Monday December 27

Chairman: Jacob B. Taylor, President
Topic: Accounting in Transition
Papers:
"The Next Step in Accounting," Commissioner Robert E. Healy, Securities and Exchange Commission
"Accounting and The Law," A. A. Berle, Jr., New York City

Second Session. 7:30 P.M., Monday, December 27

Discussion session, no organized program.

Third Session. 9:30 A.M., Tuesday, December 28

Chairman: Roy B. Kester, Columbia University
Topic: Accounting History and Education
Papers:
"Characteristics of Bookkeeping Before Paciolo," Raymond de Roover, Cambridge, Massachusetts
"Early University Education in Accountancy," Jeremiah Lockwood, University of Pennsylvania
"A Suggested Program of Education for the Accountant," (Based upon the report of the Committee on Education of the American Accounting Association), Hermann C. Miller, Ohio State University

Fourth Session. 2:00 P.M., Tuesday, December 28

Chairman: George A. MacFarland, University of Pennsylvania
Topic: Public Aspects of Accounting
Papers:
"A College Education for Public Accountants," N. E. Webster, Chairman, New York State Board of Certified Public Accountant Examiners
"Educational Requirements for Admission to Examinations of Accountants," E. A. Heilman, University of Minnesota
Topic: Accounting Principles
Paper:
"The Effect of Direct Charges to Surplus on the Measurement of Income," W. A. Hosmer, Harvard University

Fifth Session. 6:30 P.M., Tuesday, December 28

Annual banquet and business meeting
Reports of officers and committees
Election of officers

Sixth Session. 9:30 A.M., Wednesday, December 29

Chairman: R. A. Stevenson, University of Minnesota
Topic: Accounting Principles: A Critique of the Tentative Statement of Accounting Principles Underlying Corporate Reports
Speakers: Charles B. Couchman, New York
Henry Rand Hatfield, University of California
Victor H. Stempf, New York
General Discussion

Seventh Session. 2:00 P.M., Wednesday, December 29

Chairman: Arthur G. Rosenkampff, New York University
Topic: Accounting Principles: Consolidated Statements
Paper:
"A Tentative Statement of Accounting Principles Underlying Consolidated Reports,"—A pronouncement of the Executive Committee of the American Accounting Association, presented by E. L. Kohler, Chicago
General Discussion

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ARTICLES

CONTRIBUTORS OF ARTICLES

John Bauer is director of the American Public Utilities Bureau in New York, editor of the department on public utilities of the *National Municipal Review*, editorial consultant on public utilities, *Public Management*, and associate editor of *Public Ownership of Public Utilities* and *The People's Money*.

Carman G. Blough is chief accountant of the Securities and Exchange Commission, Washington, D.C.

Geoffrey Carmichael is assistant professor of accounting at Indiana University.

Henry T. Chamberlain, dean of the School of Commerce and Professor of Accounting at Loyola University, Chicago, is secretary of the American Accounting Association.

Joel P. Dean, on leave of absence from the department of economics at Indiana University, is now with McKinsey, Wellington & Co.

Florence Edler and her husband Raymond A. de-Roover, a professional accountant, have done considerable research work in connection with the Plantin books of account.

Frank A. Fetter until 1931 was professor of political economy at Princeton University. He is now professor emeritus.

Louis O. Foster is assistant professor of economics at Western Reserve University, Cleveland, Ohio.

Stephen Gilman is vice president and educational director of the International Accountants Society, Inc.

Howard C. Greer is professor of accounting at the University of Chicago and research director of the Institute of American Meat Packers.

Donald K. Griffith is an instructor in accounting at the University of Illinois.

Robert P. Hackett is an instructor in accounting at the University of Illinois.

J. Brooks Heckert is associate professor of accounting at Ohio State University.

Stanley E. Howard is chairman of the Department of Economics and Social Institutions of Princeton University.

George R. Husband is an associate professor of accounting at the University of Michigan. He is coauthor with Olin E. Thomas of *Principles of Accounting*.

Ralph Coughenour Jones is associate professor of accounting at Yale University.

Harry D. Kerrigan is a lecturer in accounting at Northwestern University School of Commerce.

Erich Kosiol, a professor at the University of Cologne, has described at length in an article in *Zeitschrift Für Betriebswirtschaft* entitled "Der Jahresabschluss der Actiengesellschaft" the effect of the new German corporation law on annual reporting requirements; his contribution to the Review is an excerpt therefrom.

T. R. Larimore is head of the department of economics and business at Union College, Lincoln, Nebraska.

T. W. Leland is associate professor of accounting at the Agricultural & Mechanical College of Texas.

Ragnar Liljeblad, a graduate engineer, is technical director of the Allmäna Svenska Elektriska Actiebolaget, Västerås, Sweden. He is the author of numerous articles on engineering and economic subjects.

A. C. Littleton is professor of accounting at the University of Illinois and head of its Bureau of Business Research.

Arthur N. Lorig, assistant professor of accounting at the University of Washington, holds a doctor of philosophy degree from the University of Chicago and a C.P.A. certificate from California

R. M. Mikesell is professor of accounting at Indiana University.

Paul L. Morrison is a member of the Chicago firm of Sheridan, Farwell & Morrison, Inc., investment counsellors.

Clarence B. Nickerson, assistant professor of accounting at the Harvard Graduate School of Business Administration, received a D.C.S. degree from that school in 1935.

Richard N. Owens is professor of accounting and business administration at the George Washington University.

William A. Paton has obtained an extension of his leave of absence from the University of Michigan in order to teach at the University of California at Berkeley during the coming year. A planograph edition of his *Essentials of Accounting* has just been published by Edwards Brothers, Inc., of Ann Arbor.

Gabriel A. D. Preinreich is a practicing public accountant in New York City. He is the author of *The Nature of Dividends*, published last year.

C. Rufus Rorem is the director of the Committee on Hospital Service of the American Hospital Association.

Earl A. Saliers, professor of accounting at Louisiana State University, is a well-known authority on depreciation. His present contribution deals with some of the weaknesses of plant accounting which make proper allowances for depreciation difficult to compute.

T. H. Sanders is professor of accounting at the Harvard Graduate School of Business Administration.

Andrew Schranz is reader and assistant professor at the Hungarian University for Technical and Economic Sciences at Budapest, Hungary.

DR Scott is professor of accounting at the University of Missouri.

Shinshichiro Shimme, is a graduate of the School of Commerce at Meiji University, Tokyo, and chief auditor of the Kawasaki Dockyard Co., Ltd., at Kobe. He is the author of a number of books and articles on accounting and is particularly interested in the subject of factory costs.

Charles W. Smith, chief of the Bureau of Finance and Accounts of the Federal Power Commission, is instructor in specialized accounting in the evening school of business economics at Johns Hopkins University.

Frank P. Smith is an instructor in economics at the University of Rochester.

Charles T. Sweeney is a practicing certified public accountant of Springfield, Ohio.

H. F. Taggart is associate professor of accounting at the University of Michigan.

Edwin L. Theiss is associate professor of accounting at the University of Illinois.

C. L. Van Sickle is associate professor of accounting at the University of Pittsburgh.

Norman E. Webster is chairman of the New York Board of C.P.A. Examiners.

Robert A. White is an instructor in accounting at the University of Texas.

Edmund Whittaker, a graduate of Edinburgh University, has been Professor of Economics in Natal University College, University of South Africa, and is now assistant Professor of Economics at the University of Illinois.

F. W. Woodbridge is professor of accounting at the University of Southern California.

BOOK REVIEWS